

عنوان مقاله:

Quality improvement and shelf life extension of fresh apricot fruit (*Prunus Armeniaca* cv. Shahroudi) using postharvest chemical treatments and packaging during cold storage

محل انتشار:

مجله بین المللی علوم و فنون باغبانی، دوره 3، شماره 1 (سال: 1395)

تعداد صفحات اصل مقاله: 10

نویسندگان:

Farid Moradinezhad - *Department of Horticultural Science, College of Agriculture, University of Birjand, Birjand, Iran*

Mehdi Jahani - *Department of Horticultural Science, College of Agriculture, University of Birjand, Birjand, Iran*

خلاصه مقاله:

The main objective of this work was to assess the effectiveness of salicylic acid (SA), calcium chloride (CaCl_2) or sodium bicarbonate (NaHCO_3), and packaging on some qualitative properties of apricot fruit during cold storage. The experiments were conducted using a completely randomized design as factorial, with three replicates. Fruits were dipped in SA (0.1 or 0.5 mM), CaCl_2 (1 or 2%) or NaHCO_3 (0.2 or 0.5%) solutions for 3 min at 22°C . Then, fruits were placed into polyethylene trays and wrapped with cellophane films to create a passive modified atmosphere packaging, whilst the second group remained unwrapped. Fruits were stored in a cool room at $0.5 \pm 0.5^\circ\text{C}$. Regardless of chemical treatments, total soluble solids (TSS), organoleptic characteristics, and shelf life were higher in packed fruit compare to unpacked fruit. The TSS, weight loss and firmness were lower in fruits covered with cellophane compared to unwrapped fruit. Fruits that treated with SA (0.5 mM) and covered with cellophane film had the lowest TSS while treated fruit with CaCl_2 (1%) with no cover indicated the highest TSS. Generally, there was a significant decrease in fruit firmness under the cellophane layer compare to unpacked fruits while in treated fruit with CaCl_2 (1%) firmness in packed fruit was obviously higher than unpacked fruits. The best visual quality and taste were obtained in treated fruit with CaCl_2 (2%), followed by SA (0.5 mM) when they were packed with cellophane film. The highest shelf life obtained in treated fruit with SA (0.1 mM), followed by NaHCO_3 (0.5%). Overall, a combination of chemical treatments and packaging with cellophane film improved fruit quality and extend shelf life significantly compared to the control.

کلمات کلیدی:

CaCl_2 , NaHCO_3 , salicylic acid

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