

Abstract:

Experiments were conducted to evaluate the effects of temperature conditioning on reducing chilling injury in pomegranate fruits. In the first experiment (1997), pomegranate fruits of cultivars 'Malas Yazdi' and 'Malas Saveh' were heated at 38°C for 0 (control), 12, 24 and 36 h before storage. Treated fruits were stored at 1.5°C and 85±3 % relative humidity (RH) for 4.5 months. In 1998, fruits of 'Malas Yazdi' were heated at 55°C for 0 (control), 30, 60, 90 and 120 min. and stored at 1.5°C RH=85±3 % for 3 months. The results showed conditioned fruits at 38°C for 24 and 36 h significantly reduced chilling injury symptoms (browning) and weight loss but had no significant effect on electrolyte leakage, total soluble solids, total acidity, ascorbic acid and pH of fruits after removal from the storage. Heating at 55°C significantly reduced chilling injury symptoms, electrolyte and K⁺ leakage but had no significant effect on fruit juice characteristics.