

Effects of Hot Water Treatments on Reducing Chilling Injury of Pomegranate (*Punica granatum L.*) Fruits During Storage

M.Rahemi¹ S.H.Mirdehghan²

1-Department of Horticulture,College of Agriculture,Shiraz University,Shiraz,Iran

2-Department of Horticulture,College of Agriculture, Vali-Asr University, Rafsanjan, Iran

In the preliminary experiment(1997), fruits of cultivars 'Malas Yazdi' and 'Malas Saveh' were dipped in warm water at 75-55 °C , imazalil (1 and 3 /1000)and benzyladenin(80 and 100 mg/L) for 2 and 5 min. Distilled water at 25 °C was given as control treatment for 2 and 5 min.Treated fruits were stored at 1.5 °C and 85+3% relative humidity(RH) for 4.5 months.Although water at 75 °C resulted heat injury to the skin of the fruit, warm water at 50 °C comparing to the other treatment significantly reduced chilling injury.

In second experiment , fruits of 'Malas Yazdi' were dipped in warm water at 0(control),25 , 35, 45, 55 and 65 °C for 2 and 5 min.Treated fruits were stored under the mentioned conditions of the first experiment for 3 months.The data showed that increasing water temperature to 45 °C significantly reduced chilling injury,electrolyte and K+ leakage but had no significant effect on total soluble solids, total acidity, ascorbic acid and pH of fruits after coming out from storge.