

The Effects of Calcium chloride, Hot Water Treatment and Polyethylene Bag Packaging on the Storage Life and Quality of Pomegranate (Cv: Malas- Saveh)

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In this experiment the effects of preharvest calcium chloride and postharvest hot water treatment as well as the use of polyethylene bags for packaging on the quality improvement of pomegranate fruit during cold storage were studied. For this purpose Calcium chloride was sprayed at two levels on August 2004 (1% and 2%). Pomegranate fruits of Malas - Torsh cv. was harvested at fully ripen stage and treated with hot water (45, 50 and 55 °C for 20 minutes, 1 minute and 30 second respectively). Thereafter each fruit was wrapped up in a polyethylene bag and stored in cool store room with 1 °C and relative humidity of 85% for 3 months. The experiments were conducted using a completely randomized design of three replicates. The results indicated that fruits wrapped with polyethylene had a significant effect on preventing weight loss, improving the appearance as well as marketability of fruits during storage, while showing no effect on pH, TSS and fruit dry matter. Also it was observed that fruits treated in 50°C hot water showed significant improvement of quality while treatment with 45 °C hot water failed to show such effects. In total, a combination of Calcium chloride and polyethylene bag packaging along with 50 °C hot water treatment caused improvement in the general quality of stored fruit and decreased fungi infection and chilling index.

Keywords: Pomegranate, Calcium chloride, Storage life, Hot water treatment, Polyethylene bags packaging

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