Abstract:

Satsuma fruit (C. unshiu) were dipped in hot water for three minutes (HWD) or wilted at room temperature till 3% weight loss before storage at 3 °C for 6, 8 and 10 weeks. In comparison with control, fruit from the HWD at 48 and 50 °C showed significantly lower weight loss after 6 weeks of storage and after 6 weeks + 7d at room temperature. After 8 and 10 weeks, there were no significant differences in the storage weight loss. Weight loss during simulated retail display was significantly lower for fruit treated with hot water dips at 48 and 50 °C after 8 weeks of storage, but after 10 weeks, that was true only for fruit treated with HWD at 48 °C. Wilting decreased the juice content of the fruit after 8 weeks and after 10 weeks the same was true for HWD's at 48 °C. SSC of the fruit treated by HWD at 48 °C decreased after 8 weeks, and all treatments decreased the SSC and TA of the fruit after 10 weeks compared with control. HWD at 48 °C decreased the SSC/TA ratio after 6 weeks and increased it after 8 and 10 weeks. There were no significant difference in percentage of fruit with chilling injury between the control and all treatments after 6 weeks. HWD's at 46, 48 and 50 °C and wilting resulted in lower incidence of CI after 8 weeks. Contrary to the reports in literature, HWD at 52 °C showed no effect on CI after 8 weeks; however, after 10 weeks the fruit showed an increased CI incidence. Wilting showed no CI after 10 weeks, and fruit treated with HWD at 50 °C did not differ in CI incidence compared with control.