

Abstract:

Sapote mamey fruit (*Pouteria sapota* (Jacq.) H.E. Moore and Stearn) is very sensitive to infestation with fruit flies, especially with *Anastrepha serpentina*. There is no quarantine treatment used in Mexico for this fruit, and therefore its entrance to many national and international markets is restricted. In this work we have investigated the effect of forced hot air treatments on insect mortality and on the quality of the fruit. Fruits were exposed to different hot air treatments at 40, 43, 45, 46 or 50°C for 120, 150 or 180 minutes, and were then stored at 10°C or 25°C for up to 15 days. Larvae and eggs mortality was achieved at 43°C for 120 minutes. Lower temperature (40°C for 120 minutes) was effective in causing the mortality of larvae, but not of eggs. Heat treatment at 43°C for 120 minutes did not cause fruit injury, and caused the least loss in firmness, fruit mass, and color. However, hot air treatments at 50°C caused fruit injury and significant losses in texture, fruit mass and color.