

Abstract:

The objective of this study was to investigate the effect of heat treatments using forced moist (100% RH) or dry (50%) hot air with or without Thiabendazole (TBZ) on the chilling injury (CI), fungi development and quality of 'Maradol' papaya fruit stored at 5 or 20°C for up to 42 days. Moist hot air at 48.5°C or 50°C for 4 h caused fruit injury. Dry air at 48.5°C for 4 h, alone or in combination with TBZ, decreased CI intensity and fungi development, and the best effect was achieved by combining dry heat treatment and TBZ, without causing negative effects on fruit quality and without causing heat injury. Hot air treatment, especially in combination with TBZ, decreased growth of inoculated *Colletotrichum gloeosporioides*. Hot air treatment had a tendency to preserve the content of sucrose, fructose and glucose. Trehalose was not detected in papaya, probably due to the presence of trehalase. Hot water treatment, with or without TBZ, did not cause any negative effect on the content of β -carotene and lycopene.