

**Title** Reduction of Postharvest Decay of Peach and Nectarine Caused by *Monilinia laxa* Using Hot Water Dipping

**Author** Tomislav Jemric, Dario Ivic, Goran Fruk, Helena Skutin Matijas, Bogdan Cvjetkovic, Matko Bupic and Branimir Pavkovic

**Citation** Food and Bioprocess Technology, 4, Number 1, 149-154, 2011

**Keywords** Brown rot; Heat treatment; Cold storage; *Prunus persica* (L.) Batsch var. *persica*; *Prunus persica* (L.) Batsch var. *nucipersica* (Suckow) C.K. Schneid; Fruit quality

### Abstract

The effect of hot water dipping (HWD) at 40, 44 and 48 °C for 6 and 12 min on germination of conidia of brown rot fungus (*Monilinia laxa*) in vitro and the effect of HWD at 48 °C for 6 and 12 min on the fruit quality and development of *M. laxa* on peach cv. "Roig" and nectarine cv. "Venus" after artificial inoculation in cold storage were studied. Temperature and duration of treatment significantly affected germination of conidia. After HWD at 48 °C for 12 min, the lowest germination of conidia (9%) was recorded, which was more than 10 times lower than control (93%). After 3 days from inoculation, there were 80% of inoculated spots with visual symptoms of decay caused by *M. laxa* on control peaches and 40% of such spots on control nectarines. Successful infections were recorded on only 5% of inoculated spots of nectarine and 10% of inoculated spots of peach after HWD at 48 °C for 12 min. HWD at 48 °C for 12 min significantly decreased titratable acidity and increased soluble solids concentration/titratable acidity ratio in nectarines. No visual symptoms of heat damage were found on fruits as a consequence of any of the studied treatments. The results show that it is possible to control postharvest brown rot (*M. laxa*) on peach using HWD at 48 °C for 12 min and on nectarine using HWD at 48 °C for 6 min without a significant loss of fruit quality.

<http://www.springerlink.com/content/g003274g82251ph5/fulltext.pdf>