

Title Mango fruit softening response to postharvest heat treatment  
Authors M.M. Benitez, A.L. Acedo Jr., P. Jitareerat and S. Kanlavanarat  
Citation ISHS Acta Horticulturae 712: 811-816. 2006.  
Keywords *Mangifera indica* L.; ripening; heat shock; pectin methylesterase; polygalacturonase

#### **Abstract**

Mango fruit cv. 'Namdokmai' at the mature-green stage were heat-treated by dipping in 50°C or 55°C water for 5 min and stored at 25°C with 90-95% relative humidity. Fruit dipped in ambient water served as control. Softening slowed down in response to heat treatment. The effect of the two heat treatments did not considerably differ. Concomitant with softening, the heat-treated fruits exhibited reduced pectin methylesterase (PME) and polygalacturonase (PG) activities in both peel and pulp tissues. Heat treatment at 55°C generally resulted to lower PME and PG activity than at 50°C. These results indicate that heat inhibition of ripening-associated softening is due to inhibition of pectin-degrading enzymes.