

Thesis Title	Postharvest heat treatment for minimizing disease on mandarin 'Sai-Namphaung'.
Thesis Credits	12
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### Abstract

Citrus fruits cv. Mandarin 'sai-namphaung' collected from Thanathorn orchard, Chiang Mai and stored at 20 °C for three weeks showed different level of fruit rot diseases. These fruit rot diseases caused by *Alternaria* sp., *Colletotrichum gloeosporioides*, *Fusarium* sp., and *Penicillium digitatum*. *P. digitatum* was a major pathogen and caused the highest disease incidence and severity. Treated this fungal spore with hot water at 40, 44, 48 and 52 °C for 10 min had an effect on spore germination. The highest reduction of spore germination was obtained at 52 °C. Control of *Penicillium* fruit rot on citrus fruits by dipping in hot water at 40, 44, 48 and 52 °C for 10 min and 52, 54, 56, 58 °C for 2, 4, 6, 8 min were tested. The lowest disease incidence was obtained at 48 °C for 10 min. No antifungal compound was detected by thin layer chromatography in the peel of treated fruits. Storage life of citrus fruits was extended to 8 weeks by dipping in hot water and then, wrapping with plastic film. This treatment also showed lower disease incidence than dipping in hot water, wrapping with plastic film and then, dipping in hot water, and untreated but these treatments showed no significant difference after 2 weeks storage.

Keywords : Mandarin 'Sai-Namphaung'/ Postharvest/ Heat Treatment/ Minimizing Disease/

*Penicillium digitatum*