Title Use of electrolyzed oxidizing water to control postharvest disease during storage of tangerine

cv. 'Sai Nam Pung'

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Abstract

The effect of electrolyzed oxidizing (EO) water on the inactivation of *Penicillium digitatum* inoculated on tangerine fruits was investigated. An electrolytic cell for the production of EO water was operated using saturated NaCl. EO water produced contained a free chlorine concentration of 215 ppm at a pH of 4.84. A spore suspension of *Penicillium digitatum* was inoculated into EO water and incubated at 27°C for 30, 60, 90, 120 and 240 s. It was found that EO water exposure times of 120 and 240 s completely inhibited the growth and development of the fungus. The fruits inoculated with *Penicillium digitatum* were washed with EO water for 4, 8 and 16 min. and stored at 5°C for 21 days. The results showed that washing fruits for 8 min. was effective in reducing the disease incidence. Moreover, none of the treatments with EO water had any effect on the quality changes of fruits as measured by total soluble solids, titratable acidity, percent weight loss and peel color.