

**Title** Effects of hot water and sodium hypochlorite treatments on survival of *Salmonella* spp. and qualities of fresh-cut pineapple

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#### **Abstract**

Effects of hot water and sodium hypochlorite (NaOCl) on the survival of *Salmonella* spp. and the quality of fresh-cut pineapple cv. 'Phuket' were studied. Whole pineapple fruit were inoculated with *Salmonella* spp. at a concentration of  $10^8$  cfu/ml and stored at 20°C for 5 days before dipping in hot water at 50 and 60°C for 3 min or in NaOCl at the concentration of 100 and 200 mg L<sup>-1</sup> for 5 min. The data showed that NaOCl treatment at 200 mg L<sup>-1</sup> was the best treatment to reduce *Salmonella* spp. on peel by 2.72 log<sub>10</sub> cfu/cm<sup>2</sup> while use of hot water treatment at 50 and 60°C were much less effective. Combined effects of hot water and NaOCl treatment on the survival of *Salmonella* spp. and quality of fresh-cut pineapple were examined by treating the inoculated whole fruits in hot water (50°C) containing 200 mg L<sup>-1</sup> NaOCl for 3 min. The results revealed that amounts of *Salmonella* spp. on peel and flesh of fresh-cut pineapple were reduced by 2.15 log cfu/cm<sup>2</sup> and 0.43 log cfu/g respectively. In addition, hot NaOCl treatment had no significant effects on the changes of weight loss, ascorbic acid, titratable acid, reducing sugar, firmness, flesh color (L value) of pineapple except for soluble solids content.