

Title The influence of washing treatment on quality of sweet pepper

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Abstract

Recently, demands for minimally processed ready-to-eat vegetables have increased because they provide convenience to the user. However the potential exists for minimally processed vegetables to be polluted by microorganisms. This research investigated the effects of washing with water, NADCC, hydrogen peroxide, sodium hydrogen carbonate, and NSU(NADCC + sodium hydrogen carbonate + ultrasonic) or using ultrasonic, on the control of microorganisms growth. Washing with water only reduced the number of microorganism to 0.75-1.65 log₁₀ CFU/g. NSU combined with three method for washing sterilization retarded remarkably the growth of aerobic bacteria (2.98 log₁₀ CFU/g.), coliforms (3.12 log₁₀ CFU/g.) and yeast (2.71 log₁₀ CFU/g.). After NSU treatment, respiration rate was highest in all of treatment (12.9 mg/kg/h) and the amount of ethylene was also high (19.0 µl/kg/h). There were no differences in fruit quality attributes such as sugar content, firmness, vitamin C among treatments. The NSU treatment can control microorganisms efficiently without damaging fruit quality.