

A study on factors affecting the quality of fresh-cut lettuce was conducted. The head lettuce was longitudinal cut into 1.5-2.5 centimeter wide using a sharp knife. Fresh-cut lettuce was then dipped in 50, 100 and 150 mg/l chlorine solution in the form of sodium hypochlorite for 5 minutes / 0.1, 0.5 and 1.0 % acetic acid solution for 5 seconds / 0.1, 0.5 and 1.0 % citric acid solution for 5 seconds compared with control (no dipping) and stored at 26 ± 2 °C for 24 hours. It was found that the fresh-cut lettuce dipped in 50 and 100 mg/l chlorine solution, 1.0 % citric acid solution and 0.1 % acetic acid solution delayed the development of brown colour on the surface of cutting area and the leaf rib for 24 hours storage. The chlorine solution at 150 mg/l could also delay the development of brown colour but there was a residual odour of chlorine in the samples. All concentrations of chlorine and citric acid solutions reduced the total pre-and post-storage microbial count for 1.4 – 10.4 % in the fresh-cut lettuce. Fresh-cut lettuces that were dipped in 1.0 % citric acid solution for 5 seconds, were packed in 40 and 50 micron polypropylene bags. These vegetables were stored at 2, 5 and 10 °C. It was found that fresh-cut lettuce packed in 40 and 50 micron polypropylene bags and stored at 2, 5 and 10 °C had product qualities that were accepted by a panel and they had the storage life of 13, 10 and 5 days respectively. Polyphenol oxidase activity of fresh-cut lettuce that was dipped in 1.0 % citric acid solution for 5 seconds, packed in 50 micron polypropylene bags and stored at 2 °C was determined. It was found that brown colour development of cutting surface and leaf rib related to increasing of the polyphenol oxidase activity. The respiration rate of the fresh-cut lettuce was higher than the head lettuce for 52 % and dipping in 1.0 % citric acid solution increased the respiration rate of the fresh-cut lettuce for 19.3 %.