

# Impact of *Aloe vera* gel coating enriched with basil (*Ocimum basilicum* L.) essential oil on postharvest quality of strawberry fruit

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## Abstract

Strawberries are very perishable and decay rapidly after harvest. Among the several preservation techniques, application of edible coating is found to be an effective way to extend the fruits shelf life and has gained lots of attentions in the recent years. In the present study, the effect of *Aloe vera* gel coating alone and combined with basil essential oil in 500 and 1000  $\mu\text{L L}^{-1}$  concentrations on the postharvest qualities of strawberry fruit was investigated. After treatment, the fruit were stored at 4 °C and 85% relative humidity for 12 days. The surface morphology of samples was also studied by using a scanning electron microscope (SEM). The results showed that the coating treatments had a significant effect on the respiration rate of the fruit, delayed weight loss, softening, and fungal growth. Besides, the treatments led to maintain the total acidity, flavor index,  $L^*$ , and hue° color values and sensory attributes without affecting total soluble solids, and pH of strawberries during storage. The efficacy of treatments enhanced in the samples where *Aloe vera* gel was combined with basil oil specially at 1000  $\mu\text{L L}^{-1}$  of basil oil. Thus, the edible coating prepared from the combination of *Aloe vera* gel and basil oil could be a promising postharvest treatment for maintaining the quality of strawberry fruit during cold storage.