

Abstract:

One method of extending postharvest shelf life is the use of edible coatings. Such coatings are made of edible materials that are used to enrobe fresh produce, providing a semipermeable barrier to gases and water vapour. Guavas cultivated at Aguascalientes, Mexico were coated with a solution of one of the following polymers: Potato starch, sodium alginate, carragenan, and pectin. The fruit was covered by immersion in the solution at 50°C, then dried at 50°C during 30 minutes. After coating, the maturation process was compared to uncoated fruit. The evaluation of the functional properties of the edible coatings was done by measurement of the barrier properties of edible films to water vapour (gravimetric method) and to aroma compounds (dynamic method). The results showed an increase of the fruit's shelf life with at least three days compared to the uncoated fruit, at 25°C and 50-70% R.H. The highest efficiency preserving the fruit was obtained with potato starch and pectin based coatings, increasing the preservation of the sensorial characteristics of the fruit (size, yellow colour and aroma) with 15 days.