

Abstract:

The main advantages that edible coatings can provide in the preservation of fruits are: to retard moisture loss, to modify gas exchange between the product and its environment, and to prevent microbial spoilage. In the particular case of "Reinette du Canada" apple, the application of a suitable coating can reduce its high weight loss rate. In order to evaluate the effects of edible coatings, three batches of Reinette apples were prepared. One of them was coated by dipping the fruits in a mixture of carnauba wax and shellac; the second was prepared by first bathing the fruits in a chitosan solution and subsequently dipping them in the aforementioned solution and the third was the control batch. All batches were kept at 0 °C for 6 months. Changes in weight, soluble solids, titratable acidity, firmness, colour, ethanol and acetaldehyde content were monitored. Internal O₂ and CO₂ concentrations were also measured. The use of these edible coatings slows weight loss and softening, and also enhances green colour retention. However, acetaldehyde and ethanol concentrations indicate the development of off-flavours in the batch with the double coating.