ARTÍCULO CIENTÍFICO

ESTUDIO DE LA CONSERVACIÓN DE FRUTAS EN "IV GAMA" CON LA APLICACIÓN DE UN RECUBRIMIENTO BIODEGRADABLE-ACTIVO

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APPLICATION OF ACTIVE BIODEGRADABLE COATING ON "IV GAMA" FRUITS

Abstract

Many fruits treated with Gamma IV show problems of enzymatic browning due to the action of polyphenol oxidase, it is the case of silk-banana (Musa acuminata Gros Michel) and the local apple "Emilia" (Malus communis). In this work it has been studied the effects of applying a biodegradable film with added citric acid. The film was made using local materials such as cassava starch and bovine gelatin in a 2% total solids dispersion with a 50:50 starch – protein ratio, using glycerol as plasticizer; also, citric acid was added to the dispersion in 10% (w/w) ratio (R/AC -10%), and 15% (w/w) ratio (R/AC- 15%). The skinless and sliced fruit was sprinkle-coated with the made dispersion, then the skinless-sliced-coated fruit was stored at 12°C. After 24 hours the stored fruit was characterized for quality parameter such as, moisture, °Brix, texture, color, oxidation index, vitamin C content, acidity. Furthermore, the fruit was subjected to microbiological analysis to assure its innocuity, making sure it is safe to consume. The results shown that the biodegradable film does not have any effect on the fruit quality, in addition the best results were reached when using the R/AC10% biodegradable film due to it retards 15% the enzymatic browning, when applying the oxidation index formula, with respect to the control. Furthermore, the fruit shown better organoleptic characteristics in the sensorial analysis.

Keywords: cassava starch, silk banana, bovine gelatin, national Emilia apple, edible coating.

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