Abstract

Saavedra del Aguila, Juan; Sichmann Heffig-del Aguila, Lilía; Fumi Sasaki, Fabiana; Mitsuyuki Tsumunuma, Guy; Graças Ongarelli, Maria das; Fillet Spoto, Marta Helena; Jacomino, Angelo Pedro; Marcos Ortega, Edwin Moisés; Kluge, Ricardo Alfredo

POSTHARVEST MODIFICATIONS OF MECHANICALLY INJURED BANANAS.
Asociación Iberoamericana de Tecnología Postcosecha, S.C.
México

Available in: http://www.redalyc.org/src/inicio/ArtPdfRed.jsp?iCve=81315091003

The major problem affecting bananas (Musa spp.) during and after harvest is the susceptibility of the mature fruit to physical damage caused during transport and marketing. The purpose of this study was to evaluate the effects of mechanical injuries on physiological, physicochemical and anatomical parameters of banana fruits. The treatments were: non-injured fruit (control), three 60 cm free falls, three longitudinal cuts (70 mm long and 2 mm deep), three longitudinal scratches on the edges (50 mm long and 2 mm wide), and compression for 15 minutes (equivalent force of 52.9 Newton). Fruits were stored for 21 days at 25°C and 75% RH. The parameters analyzed were the respiratory rate and ethylene production, loss of fresh mass, pulp/skin relation, total soluble solids (TSS), total acidity (TA), TSS/TA ratio, total amount of carotenoids, ascorbic acid amount, firmness, color (L*, chroma and hue) and evaluated by electronic scanning microscopy. Fruits from all treatments showed a respiratory peak on the nineteenth day and a decrease in this variable afterwards. The kind of injury may anticipate by one (impact injuries) or two (cut and scratching injuries) days the ethylene production peak, which occurs on the 15th day after harvest. It was observed that the cutting and scratching treatments were responsible for the most undesirable changes in fruits, such as increased loss of fresh mass and changes in color (darkening), when compared to the control and the other treatments. Consequently, cutting and scratching injuries can be considered the most harmful postharvest mechanical injuries for bananas.

Keywords

Musa acuminata AAA cv. Nanicão, ripening, color, damage, postharvest

How to cite | Complete issue | More information about this article | Journal's homepage

www.redalyc.org
Non-Profit Academic Project, developed under the Open Acces Initiative