Abstract

Saavedra del Aguila, Juan; Sichmann Heiffig-del Aguila, Lília; Fumi Sasaki, Fabiana; Mitsuyuki Tsumanuma, 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.
Revista Iberoamericana de Tecnología Postcosecha, vol. 10, núm. 2, 2010, pp. 73-85
Asociación Iberoamericana de Tecnología Postcosecha, S.C.
México

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

Revista Iberoamericana de Tecnología Postcosecha
ISSN (Printed Version): 1665-0204
rebasa@hmo.megared.net.mx
Asociación Iberoamericana de Tecnología Postcosecha, S.C.
México

The major problem affecting bananas (Musa spp.) during and after harvest is the susceptibility of the matur e fruit to physical damage caused during transport and marketing. The purpose of this study was to evaluat e the effects of mechanical injuries on physiological, physicochemical and anatomical parameters of ban ana fruits. The treatments were: non¿injured fruit (control), three 60 cm free falls, three longitudinal cuts (7 0 mm long and 2 mm deep), three longitudinal scratches on the edges (50 mm long and 2 mm wide), and com pression for 15 minutes (equivalent force of 52.9 Newton). Fruits were stored for 21 days at 25oC 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, ascor bic acid amount, firmness, color (L*, chroma and hue) and evaluated by electronic scanning microscopy. F ruits from all treatments showed a respiratory peak on the nineteenth day and a decrease in this variable aft erwards. The kind of injure may anticipate by one (impact injures) or two (cut and scratching injuries) days t he ethylene production peak, which occurs on the 15th day after harvest. It was observed that the cutting an d scratching treatments were responsible for the most undesirable changes in fruits, such as increased los s of fresh mass and changes in color (darkening), when compared to the control and the other treatments. C onsequently, 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