

Title Bioactive amines and carbohydrate changes during ripening of 'Prata' banana (*Musa acuminata* × *M. balbisiana*)

Author Regina C. Adão and M. Beatriz A. Glória

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### Abstract

Green bananas were harvested at the full three-quarter stage, conditioned in polyethylene and stored for 35 days at  $16 \pm 1$  °C and 85% relative humidity. Peel colour changed with time. The yellow colour ideal for consumption was achieved at 21 days and, after 28 days, brown specks started to appear. There was a significant increase in the pulp-to-peel ratio. The green fruit had high starch and low soluble sugars levels. Starch levels decreased significantly throughout ripening. At the seventh day of storage sucrose was prevalent, however, fructose and glucose levels increased while sucrose remained constant, decreasing after 28 days. Starch loss followed a first order reaction. Formation of glucose and fructose followed zero order kinetics with higher rate for fructose. The bioactive amines detected were putrescine, spermidine and serotonin. Serotonin decreased significantly after the 14th day of storage. Putrescine levels were similar up to 21 days and decreased significantly thereafter.