

**Title** Quality and antioxidant activity during ripening of fruits from yellow mom bin (*Spondias Mombin* L.) genotypes

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### Abstract

Yellow mombin tree (*Spondias mombin* L.) belongs to the *Anarcadiaceae* family, is a Northeastern Brazil's spontaneously grown species that produces fruits of important socio-economic potential for fresh consumption and processing. This fruit is widely consumed for its highly appreciated sensorial and nutritional quality, as well as for its diversity of uses. The objective of this experiment was to evaluate the bioactive compounds and antioxidant activity during ripening of yellow mombin fruits harvested at three maturity stages (totally green, breaker, and totally yellow skin) from cloned genotypes and progenies. Six genotypes were selected; three grown from seeds (progeny) and three grown from stalks (clones). Fruits were evaluated for soluble solids (SS), titratable acidity (TA), SS/TA ratio, total soluble sugars, reducing sugars, starch, ascorbic acid, total chlorophyll, carotenoids, yellow flavonoids, total extractable polyphenols (TEP), and antioxidant activity by the method of  $\beta$ -carotene/acid linoleic. The experimental design was the completely randomized, with four replications of 500g of fruits for each maturity stage. Means were compared by the Scott-Knott test at 5% of probability. For each genotype evaluated, there was a decline in the total chlorophyll followed by an increase in carotenoid contents as maturation proceeded. Fruits from cloned genotypes showed higher TEP contents. There was a positive correlation between PET content and the percentage of inhibition of oxidation in the studied fruits. For the inhibition of oxidation, the results herein demonstrate that yellow mombin fruit presents high antioxidant activity.