

## ABSTRACT - PLANT PHYSIOLOGY

### **DETERMINATION OF MOISTURE LOSS IN MANGO FRUITS COATED WITH EDIBLE COATING STARCH-BASED**

*Gabriel Duarte Gondim (gabrielvdc14@gmail.com)*

*Matheus Ferreira Almeida (theualmeida.tf@gmail.com)*

*Gabriela Leite Silva (gabriela.leitesilva@hotmail.com)*

*Maiara Costa Silva (maiara\_costa\_@hotmail.com)*

*Carlos Eduardo Ferraz Alves (carlooseduardoferrazalves@outlook.com)*

*Bruna De Andrade Braga Mendes (brunabragamendes@hotmail.com)*

*Dioneire Amparo Dos Anjos (dioneireanjos@hotmail.com)*

*Cristiane Martins Veloso (crisvel@uesb.edu.br)*

Mangoes are tropical climacteric fruits, which ripen or deteriorate more quickly after harvesting or during frequent trade. One of the main characteristics of the ripening of climacteric fruits is the loss of moisture, and consequent weight loss, due to the active metabolism. In this context, the use of edible coating can reduce the amount of mass lost during the post-harvest of the fruit. Therefore, the objective of this work was to determine the mass loss in mango fruits (*Mangifera indica* L.), coated with edible coating based on cassava starch (*Manihot sculenta* Crantz) oxidized with the addition of lemongrass essential oil. 'Palmer' mango fruits, harvested at stage 2 of ripening, were immersed in an edible coating solution, for 30 minutes, composed of oxidized cassava starch 3% (m/V), glycerol 35% (m/V) and a lemongrass essential oil emulsion. A

factorial scheme 2 (with and without edible coating) x 3 (three evaluation periods, 01, 07 and 15 days after treatment) was used, with four replications of ten fruits. The fruits were stored in BOD refrigerated at  $12\text{ }^{\circ}\text{C} \pm 1^{\circ}\text{C}$ . The weight loss was calculated by weighing the samples on a semi-analytical balance. It was observed that the treatments had a significant effect on weight over time. In the uncoated treatment, there were high rates of moisture loss, with consequent weight loss (19.78 %), during storage, in relation to the treatment with coated fruits (7.27 %). Between the evaluation times, there was a significant difference as the storage is prolonged, however in the treatment with coating, this effect is reduced (60.32 %). Therefore, the edible coating was able to reduce the physiological effects, and consequently weight loss, during the storage, suggesting, therefore, the maintenance of postharvest quality, with lower fruit decay than those that were not subjected to treatment.