

PP8-17**Edible coatings of galactomannan/collagen in fruit shelf life extension**

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Short shelf life is of the utmost importance in fruit conservation. As living organisms, fruits maintain metabolism after harvesting, and its shelf-life can be extended by reducing respiration rates. This can be done by controlling factors such as temperature, light, humidity and gas composition (ethylene, O₂ and CO₂). To control these, an important strategy is the use of modified atmospheres, with low caloric galactomannan coatings. Collagen coatings have, also, already been used on meat and sausage to reduce gas and/or water vapor permeability (WVP). In this work the preparation novel edible coatings, based on the mixture of galactomannan, collagen and glycerol, was investigated, and their influence in gas transfer rates in mangoes and apples evaluated. The gas permeability properties of the coatings, presenting the best values of wettability (previously determined), were tested. Mangoes coated with an *Adenanthera pavonina* seed endospermic galactomannan-collagen-glycerol solution were studied and the gas transfer rates compared with no coated mangoes. Gas transfer rate was calculated and -28% O₂ consumption and -11% CO₂ production were observed in coated mangoes. The same procedure was done (using *Caesalpinia pulcherrima* galactomannan) in apples. The CO₂ production and O₂ consumption were approximately 50% lower in coated apples. These results suggest that these coatings, reducing gas transfer rates, may be important tools to extend fruit shelf-life.

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