

= 0.05) more susceptible to infection than the immature fruit, suggesting the role of physiological age of the fruit tissue in disease development. Lime sulphur may have a potential to be included in the integrated pest management of postharvest brown rot in peaches in traditional and as well as in organic production.

### S02.233

#### Minimally Purple Cabbage Processed and Stored in Different Packaging

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The minimally processed foods are growing in the market, thinking of the time savings and ease of food preparation. The aim of this study was to investigate the behaviour of the cabbage 'Red Dynasty' minimally processed and packed in four packaging. After minimally processed cabbage strips were placed in polyethylene terephthalate (PET) with cap; trays of expanded polystyrene (EPS), flexible film coated with polyvinyl chloride (PVC), 12 µm; film of low density polyethylene (70 µm) (LDPE) and polypropylene perforated (PP). Each package containing 200 grams of cabbage. Storage temperature was  $5 \pm 2$  °C in a cold chamber. Evaluations were made every four days, totaling twelve days of storage. The parameters were evaluated to determine the mass loss; the general appearance; odor given off; change colour; presence of fungus; soluble solids; pH; acidity; vitamin C and anthocyanin. The PET and EPS+PVC package was more effective in maintaining the quality of cabbage minimally processed, due to lower weight loss and odor exhaled, for up to six days. The perforated PP package is not recommended because there was great product weight loss.

### S02.234

#### Physical and Sensory Characterization of Edible Coatings Applied to Persimmon 'Mikado' (*Diospyros kaki*) Minimally Processed

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Edible coatings can be an important tool to ensure quality and increase the shelf life of persimmon minimally processed (MP). The experiment was conducted at Embrapa Food Technology, and the Federal University of Rio de Janeiro. It was analyzed four different types coatings: cassava starch (CS) (3.5% of cassava starch, 0.0135% of potassium permanganate, 0.0135% of calcium lactate, 1% of glycerol and 5% of polyethylene glycol 400, in relation to the weight of the main polymer); sodium alginate (SA) (1% of sodium alginate, 1500mg×g<sup>-1</sup> of potassium sorbate, 30mL×L<sup>-1</sup> of calcium chloride solution 0.4%, 0.5% of glycerol and 5% of polyethylene glycol 400, in relation to the weight of the main polymer); Carboxymethyl Cellulose (CMC) (1% of carboxymethyl cellulose, 0.25% of citric acid and 5% of polyethylene glycol 400, in relation the weight of the main polymer), and bovine gelatin (5% of bovine gelatin, 1500mg×g<sup>-1</sup> of potassium sorbate and 15%, of glycerol in relation to the weight of the main polymer). It was evaluated the thickness, permeability to water vapour, oxygen and carbon dioxide, the elasticity modulus and accomplished preliminary sensory analyses of minimally processed fruit treated with edible coatings. It was found that the CS coating showed a higher resistance and the SA the higher elasticity. The CMC coating showed the highest CO<sub>2</sub>/O<sub>2</sub> ratio and the lowest permeability to water vapour. The CS coating showed the lowest CO<sub>2</sub>/O<sub>2</sub> ratio and the highest water permeability. The sensory analysis indicated that the coatings CS and CMC were more adequate for being used on persimmon minimally processed.

### S02.235

#### Determination of Time Exposure to Ethanol for Reducing Astringency of Persimmon 'Mikado' (*Diospyros Kaki*) for Minimally Processing

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The 'Mikado' Persimmon is very astringent fruit. This fruit requires an adequate process to reduce its astringency for have quality for being minimally processed (MP). The objective was evaluate the exposure time to alcohol vapour (AV) 70% (7.00 mL álcool×Kg<sup>-1</sup> fruit) to reduce the astringency of the fruit before the fresh cut process. The experiment was conducted with fruits from Sumidouro-RJ city. The fruits were transported to Embrapa Food Technology along the night to avoid high temperatures. The fruits were collected during seven days. At each harvest, fruits were selected, cleaned and submitted to different exposure times to the AV. The treatments were: T1 - 10 hours; T2 - 36 hours; T3 - 55 hours; T4 - 83 hours; T5 - 107 hours; T6 - 130 hours; and T7 - 155 hours. The fruit quality was evaluated through the following analyses: firmness, pH, total titratable acidity (TTA), total soluble solids (TSS), and total tannin contents. It was also accomplished the sensory analysis (SA) to determine the detection threshold of astringency correlated with the concentration of soluble tannin, in the pulp. The sensory analysis was accomplished using trained panelists. There were a decrease on firmness and soluble tannin concentration of the pulp with the increase of the exposure to alcohol vapour. There were variations in the TTA and the TSS contents over time of exposure to alcohol. It was observed, through sensory analysis, that astringency was felt, by the panelists, up to 0.8161 µg×100g<sup>-1</sup> of soluble tannin in the pulp. Regarding the firmness of the fruit, the more appropriate exposure time, to AV, was 55 hours. According to sensory analysis, the best time of exposure was 83 hours. However, it was found that with 83 hours of exposure to AV, the fruits did not show enough firmness for been minimally processed.

### S02.236

#### Development and Acceptability Study of Jiotilla (*Escontria chiotilla* Weber) Marmalade

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Jiotilla (*Escontria chiotilla* Weber) is a native fruit from Oaxaca, Mexico. It is considered as a wild, exotic fruit which comes from a branched cactus. It is small with a 20 to 25 g weight, purple, fibrous pulp, with tiny black seeds. Its harvest season is from June through October. Three marmalade formulations were made in search of an alternative to provide this fruit with an added value which could allow local people to preserve it and market it. Developed marmalades should have good quality characteristics such as: firm texture, characteristic natural fruit colour and flavour, 68 to 70% TSS, a pH of 3 to 3.5 and without syneresis. Developed marmalades were made up of the following ingredients: jiotilla fruit pulp, sucrose, fructose syrup, pectin, citric acid and sodium benzoate. Two developed marmalades were eliminated due to their lack of natural features; that formulation which had firm texture and characteristic fruit colour, flavor, and with no syneresis was stored for 18 months at 22 °C. Physical-chemical and microbiological control was made in periods of 3, 6, 12 and 18 months, which resulted good quality products. Marmalade was made and stored during 3 months at 22 °C. Sensory evaluation compared to a commercial trade mark through an acceptance test by 50 consumer panelists who evaluated the following quality attributes: texture, colour, flavor and