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INFLUENCE OF PRE DRYING TREATMENT ON PHYSICAL PROPERTIES OF CARROTS

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Carrot (*Daucus carota* L.) is one of the most commonly used vegetables for human nutrition due to its pleasant flavour, nutritive value, and great health benefits related to its antioxidant, anticancer, healing, and sedative properties. Although carrots are widely consumed as fresh vegetables, due to their perishable nature, they also are subjected to different processes such as freezing, canning or dehydration to extend their shelf-life for distribution and storage. In the present work, the effect of pre-treatment of ascorbic acid on color changes and texture were investigated during hot convective drying at 60 °C. The pre-treatments were performed at 0.25% and 1% of ascorbic acid with pre-treatment times of 60 and 90 minutes. Changes in color and total color difference were evaluated by the CIELab color system and the texture of dried carrots was expressed in hardness, springiness, and cohesiveness. Regarding the total color difference, for the dried carrots soaked with ascorbic acid at both concentrations, it was observed that the pre-treatments did not have an effect on reducing the browning reactions. With respect to textural attributes, non-significant differences were observed in springiness and cohesiveness of untreated and pre-treated dried carrots, but the hardness increases at the pre-treatment time 90 minutes.

Keywords: pre-treatment, ascorbic acid, color, moisture content, texture.

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