

ABSTRACT

EFFECT OF TEMPERATURE AND CONCENTRATION OF SUGAR SOLUTION IN THE OSMOTIC DEHYDRATION PROCESS OF PAPAYA (*Carica papaya*, L)

By

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Osmotic dehydration is a food preservation technique that aims to remove some of water by immersion food in a high concentration solution. The purpose of this research was to investigate the effect of temperature and concentration of sugar solution on the change of total soluble solids, weight reduction (WR), solid gain (SG), water loss (WL), dimensions of the specimen sample and hardness of papaya during the osmotic dehydration process. This research was designed randomly with two factors, namely temperature and concentration of sugar solution. The temperature of solution set up at three levels 30, 40 and 50 °C, while the sugar solution concentration was prepared at 40, 50 and 60 °Brix. The results showed that the increasing the temperature and sugar solution concentration during osmotic dehydration process, increasing the value of WL, WR and total soluble solids but decreasing the moisture content, the dimensions of the specimen sample and hardness of samples respectively. The highest WL values was observed at 77.86% at temperature of 50 °C and concentration of sugar solution at 60 °Brix.

Keywords : osmotic dehydration, papaya, sugar concentration, temperature