

## EFFECT OF OSMOTIC CONCENTRATION ON THE COLOUR AND CHEMICAL CHARACTERISTICS OF SOME FRUITS

\*Leahu Ana, Ghinea Cristina, Ursachi Florin Vasile

University "Stefan cel Mare" of Suceava, Romania

\* Leahu Ana: analeahu@gmail.com

**Abstract:** Osmotic dehydration is the pre-treatment method of preservation the fruit and vegetable to increase its shelf-life in which these are immersed in concentrated salt or sugar solutions.

The effect of an osmotic dehydration was investigated on the colour and chemical characteristics of dehydrated fruits (apricot and plum) in fructose osmotic solutions. Difference in CIE-LAB, chroma -  $C^*$  and hue angle  $H^*$  were performed with a Chroma Meter CR-400/410. Three aqueous solution of fructose (40, 60 and 80%) were used for dehydration, during 3 h of process at temperatures of 25 °C, with fruit/osmotic agent ratio of 2:1. Water loss and solids gain showed significant differences depending on the concentration of the osmotic agent and process time. The use of highly concentrated osmotic solutions induced losses of phenolic content (TPC) and ascorbic acid in sliced apricot and quince. Fructose concentration, osmosis time and temperature induce significant increase of  $a^*$  and  $b^*$  colorimetric parameters but did not affect the lightness ( $L^*$ ) of plum slices.

**Keywords:** apricot, plum, colour, polyphenols.