Abstract

Osmotic dehydration can be viewed as an alternative method for drying of food materials with advantages of retention of gloss, texture & colour of dried products. Artificial neural network is emerging as a modeling tool for complex operations involving non linear multivariable relationships. The present work is aimed at estimation of the osmotic drying rates & weight reduction of beetroot slices as a function of concentration of sodium chloride, time & temperature using artificial neural network. Based on the observations, results & discussion, it can be said that, beetroot slices can be partially dewatered by osmotic dehydration in salt solution and percent weight loss is from 10 to 29 % depending upon the operating parameters. It can be concluded that the present work has successfully demonstrated the potential of ANN in modeling of osmotic dehydration of beetroot slices with high accuracy.

**Index Terms**

Computer Science

Applied Sciences

**Keywords**

Osmotic dehydration  Artificial neural network modeling  Beetroot slices