STUDIES ON THE PHYSICAL CHANGES OF VEGETABLES SUBJECTED TO DRYING

Sandu TALPĂ[1], Roxana Nicoleta RAȚU[1], Ionuț-Dumitru VELESCU[1], Petru-Marian CARLESCU[1]

e-mail: roxana.ratu@uaiasi.ro

Abstract

Vegetables are of significant importance in human nutrition, containing beneficial micro and macro elements for the daily diet. Vegetables are important sources of vitamins, proteins, carbohydrates and mineral salts. However, due to their seasonal growth and short shelf life, they can be consumed at certain times of the year, depending on their nature. For this reason, the vegetable sector requires additional knowledge to manage the quantities obtained seasonally, throughout the year. Although these efforts are made, large quantities of vegetables are wasted annually, which lead, on the one hand, to large losses for processors and, on the other hand, to the waste of food beneficial to the human body. In order to reduce the amounts lost annually, storage and preservation methods are studied and developed, in order to extend the shelf life, aiming to preserve the benefits of the vegetables. One of these conservation methods is drying, this has been practiced since ancient times, using the sun as a heat source. Over time, modern drying techniques have been developed in such a way as to obtain a product of high quality, to be microbiologically stable, to have the appearance and properties as close as possible to the fresh product and to have production costs as low as possible. Drying is the operation that not only extends the shelf life considerably, but also reduces transport prices for dried vegetables, as they reduce their volume by 52-80%. Although the dehydration of vegetables has a number of benefits, for its realization it is important to take into account a lot of factors, because not observing them favors the loss of micro and macro elements in the product and can lead to the destruction of their appearance.

Key words: drying, convection, vegetables