

Abstract:

Commercial fig drying is an important agricultural activity in the western part of Turkey. The region by itself provides 60 % of the world trade. The research was carried out in 2000 and 2001 on intermediate moisture sun-dried figs and rehydrated ready-to-eat type of fig fruit. After being sun-dried, figs were put in gas tight polyethylene packages. Some of the packages were heat-sealed without any application as control; some of them were applied with vacuum whereas others were filled with N₂ or CO₂ (20 % CO₂+ 80 % N₂) after vacuum application. Another variable was cold storage (4±1 °C, 55-65%RH) versus ambient temperature conditions (ca 15 °C and 55 % RH). Samples were derived at 45 days intervals and quality parameters as firmness (kg), weight loss (%), dry weight (%), moisture content (%), water activity (aw), color (L, a, b and a/b), total soluble solids (%) and sugar exudation (%) were analyzed. Dried figs were also rehydrated to exceed 30% or higher moisture content to prepare commercial packs for consumption as ready to eat. After rehydration, figs were put in gas tight polyethylene packages. Various package atmospheric compositions as air, N₂ or CO₂ (20 % CO₂+ 80 % N₂) were tested. Besides the quality parameters determined for intermediate moisture sun-dried figs, microbiological and sensory analysis such as taste, aroma and texture were performed at monthly intervals. The results proved that darkening of the fruit color and sugaring were the major quality attributes affected by the storage conditions. Vacuum applications are not recommended due to the exudation of the fruit juice.