

Freezing of The Fresh Figs at Different Temperatures and Investigation Quality Changes

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Abstract

With different evaluation methods in fig cultivation, acceleration of fig trade will be possible with the emergence of high value added products. For this reason, in our fresh fig, which is an important agricultural export product for our country, we need to maintain our place in the world and increase our existing export potential. This trial was conducted in the harvest season of 2016 and 2017, to determine the effects of freezing and thawing temperatures on fruit quality properties of hard-ripe and ripe maturity stages of Sarılop, Bursa Siyahı, Yeşilgöz and Siyah Orak fig fruits during the postharvest storage period. For this purpose, after pre-cooling treatment, fresh fig samples, which were grown without any inputs, were frozen at $-20\text{ }^{\circ}\text{C}$ for 24 h and $-40\text{ }^{\circ}\text{C}$ for 8-10 h. Frozen figs were stored at $-18\text{ }^{\circ}\text{C}$ with doypack bags for 10 months. After 60 and 300 days at $-18\text{ }^{\circ}\text{C}$, fruit samples were thawed in plastic containers during 24 hours, at $0\text{ }^{\circ}\text{C}$ and $4\text{ }^{\circ}\text{C}$, respectively. Specifically, the drip loss (%), firmness (N), total soluble solids (%) and skin color (L) values were determined at the end of storage periods. Under tested freezing and thawing conditions, there was no statistically significant differences in the drip loss values, even if the lowest drip loss was found for freezing at $-20\text{ }^{\circ}\text{C}$ for 24 h. Besides, fruit firmness decreased during the storage period both in hard-ripe and ripe fruit, and maximum total soluble solids were measured in fruit that was frozen at $-20\text{ }^{\circ}\text{C}$ and then stored at $-18\text{ }^{\circ}\text{C}$ for 300 days.

Biography

Dr. Ertan was born in 05.05.1967 in Izmir/ Turkey. She had a bachelor degree from Ege University in Turkey, in 1988 and Master of Science degree from the Department of Horticulture, the Ege University, İzmir, Turkey in 1990. She is a Researcher at Fig Research Institute, in Aydın, Turkey. Mean time she did her PhD in the same department on "the storage of figs has commercially valuable varieties". Now She is working on the storage of fresh and dried figs. She has carried out many projects related to figs since 2002. Her main research area are Postharvest Physiology and, Postharvest Logistics Performance on table figs. Married and mother of a daughter.

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