

The effects of some drying conditions on the oil and protein contents of pistachios

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Abstract

Drying is a critical step in the processing of pistachios. So improving drying conditions can affect the quality of the products significantly. Temperature and thickness of pistachios on the dryer plays an important role in the quality of the product. In this project the effect of drying temperature and bed thickness on the amount of proteins and oil content of pistachios were investigated. For this purpose the 'Akbari' cultivar of pistachios was harvested from Amirabad region of Damghan. Then they were dried by a batch dryer at 40, 55, 70 and 85°C with air flow of 1.5 m/s. The thickness of the pistachio layer on the bed was 5 and 10 cm. The data were analyzed by complete block randomized design with three replications. In this research the protein of pistachios ranged between 19.271 to 22%. Also, the highest amount of oil was observed for the samples dried at 85°C. The results showed that different temperatures had no significant effect on protein content, but the amount of oils increased significantly with temperature.