A COMPARATIVE ANALYSIS OF THE PERFORMANCE OF
NATURAL AND FORCED CONVECTION SOLAR
DRYER FOR DRYING FRUITS

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ABSTRACT

Drying is a water removal process from foodstuffs commonly used for preservation and storage purposes. Fruits and vegetables are the most important products in agriculture sector. As its contents of nutrition are very high, it has to be preserved. Keeping the products fresh is the best way to maintain its nutritional value. There are many methods for this preservation, but drying process is the most common method of food preservation because it increases the storage life. The moisture content in these produce reaches, in some cases, more than 90%. Water content is considered the main reason for micro organism growth, which leads to putrefaction. In this paper, the performance of a solar dryer for fruit, using both natural and forced convection solar dryer, was investigated and compared. Drying rate, weight losses, and removal of moisture content have been studied and analysed. A comparison between natural and forced convection solar dryers has been done.

KEYWORDS: Drying, Solar Energy, Natural Solar Drying & Forced Solar Drying

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