IMPLEMENTATION OF MINI SOLAR POWER PLANTS IN RESIDENTIAL HOUSES

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Abstract. This article contains instructions for drying fruits and vegetables by sunlight, that is, by converting sunlight into heat.

Keywords: Drying of fruits and vegetables, Helio-dryer, No energy is used, Effective use of sunlight.

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Drying is the oldest method of preserving fruits and vegetables. Initially, it was produced only using sunlight, but now special devices - solar or infrared dryers - are used for this purpose [1]. Modern dryers are offered in a wide range, but they mainly consist of several layers of mesh boxes stacked on top of each other. The device is closed with a lid, in the middle of which there is a hole for the release of moist air. The device heats the air masses, which are then directed to the working chamber and affect the ingredients. Metabolic processes are activated in the working chamber, which accelerates their drying process. During the heating process, moisture evaporates from the fruits, and their final moisture content is on average 5-8%. In order to prevent the sudden impact of open air flow on the fruits, it is recommended to first cut them and put them on trays, and after 3-4 days it is enough to store them in a dryer [2].

MAIN PART

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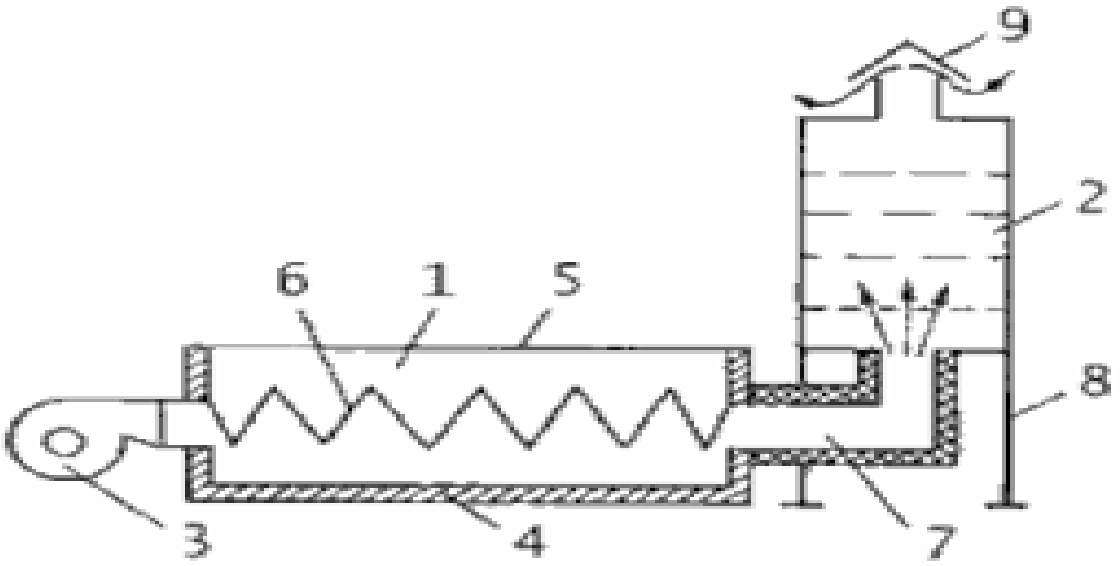
8%. In order to prevent the sudden impact of open air flow on the fruits, it is recommended to first cut them and put them on trays, and after 3-4 days it is enough to store them in a dryer. Infrared dryer with heating elements This type of dryer emits infrared radiation of a certain wavelength, which is actively absorbed by the water contained in the products, but not absorbed by the fabric of the dried blanks. Thus, when moisture is removed at low temperatures (40-60 degrees), vitamins and biologically active substances are preserved in fruits and vegetables. In addition, they retain their natural color and aroma even after drying [6-8]. The device using infrared heating elements has the following characteristics: retention rate of useful substances: 80-90%; vitamin loss rate: 5-15%; reduction of blanks in size: up to 3-4 times; reduce the weight of blanks: 4-8 times; storage of products after drying: up to 2 years in closed containers [9-12].



Chamber solar dryer with fan and corrugated heater: 1-Air heater, 2-Drying chamber, 3-Fan, 4-Heat insulated body, 5-Transparent insulation, 6-Black corrugation, 7-Air pipe, 8-Handle, 9 -Hot air outlet.

The heat-insulated body of the air heater with transparent insulation has a darkened light-absorbing surface made of corrugated metal. In the air heater, the light coming from the sun is converted into heat. Black corrugated is useful for this process [13-14]. The purpose of choosing transparent insulation is to convert sunlight into unobstructed heat. The heat collected in the heater with the help of a fan is directed to the main drying chamber. In order not to lose the quality of the product, a hole is drilled in the upper part of the drying chamber, it prevents the product from becoming too wet [15-18].

CONCLUSION

Drying of fruits and vegetables has been developed since ancient times, but now devices for drying fruits and vegetables are being developed. Previously, the outdoor environment was used to dry fruits and vegetables, which of course brought many disadvantages, for example, dust impact, bird impact, weather impact, etc. These disadvantages can be avoided with the devices currently manufactured.

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