

STUDY ON DESIGNING AND MANUFACTURING A MULTIPURPOSE MACHINE FOR DRYING AND STERILIZING OF SLICED DRAGON FRUITS

Vu Ke Hoach, Le Anh Duc

Summary

The research aim to design, manufacture and test of a multipurpose machine for drying and sterilizing of sliced dragon fruits with capacity of 50 kg/batch. The machine has been designed and manufactured. Heat pump with a power of 5 HP, infrared power of 4.600 W, sterilizing unit using UV-C ultraviolet lamp with power of 320 W. The operating parameters of the machine such as drying temperature, drying air velocity, power of infrared lamps, drying time, sterilizing time are set, displayed and monitored automatically and exactly. Energy parameters of drying and sterilization processes are recorded and stored on the energy recorder. The experimental results shown that the machine operates stably, the efficiency of drying process is obvious when drying with the support of infrared.

Keywords: *Drying, heatpump, infrared, sterilize.*