

عنوان مقاله:

Energy Consumption in Hot Air Drying of Echium Flowers

محل انتشار:

چهارمین کنفرانس بین المللی رویکردهای نوین در نگهداشت انرژی (سال: 1393)

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نویسندگان:

,Fatemeh Nadi - Assistant Professor, Islamic Azad University, Azadshar Branch

Khodayar Hemmati - Associate Professor, Gorgan University of Agricultural Sciences

خلاصه مقاله:

Dried violet-blue petals of Echium amoenum Fish. and C.A. Mey. has long been used as a tonic, tranquillizer, and diaphoretic and as a remedy for cough, sore throat and pneumonia is known in traditional medicine of Iran as Gol-e-Gavzaban. In this research paper, the influence of several drying conditions on energy consumption in the drying of Echium flowers is presented. Temperature levels of 40, 50 and 60 °C and air velocity of 0.5, 0.75 and 1 m/s were used as the treatments. The air was heated by three electrical resistances with power of 800W, while the temperature was controlled with the aid of thermocouples connected to the drying equipment. The energy consumption for drying were in the range of 1.2- 3.6 (kW/h) and Results show that energy consumption diminished when temperature increased, while it increased with increasing air velocity due to high value of heat and mass transfer. The higher the temperature and lower air velocity caused lower the total time of drying and lower energy consumption. It was .observed that the drying air temperature presents significant influence on the process

کلمات کلیدی:

Hot air drying, Drying time, Energy consumption, Echium

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