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Energy Consumption and quality attributes for drying postharvest of dragon fruit (Hylocereus undatus) following disinfesting hot air treatments

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Hot air drying is one of the simplest drying methods with low investment and operating costs. In this work, energy consumption and quality attributes for drying postharvest of dragon fruit (Hylocereus undatus) were studied. Energy consumption, moisture content, color and sensory evaluation were measured for drying with a hot air dryer. Drying experiments of freshly dragon fruit were conducted at different levels of drying air parameters including temperature (T= 70, 80 and 90℃), velocity 0.5 m/s and relative humidity 40%. The result found that the drying rate increased with drying temperature, enhanced the drying rate and reduced both drying time by 110 min (46%) and specific energy consumption by 90℃ water removed (72%). One of the best indices for explaining color changes of the product during processing is total color difference, It can be seen that L, *a* and b*values increased with drying temperature. Sensory acceptability for the product dried under 90℃, velocity 0.5 m/s and relative humidity 40% were comparable to that of the reference (freshly dragon fruit).

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