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Simultaneous blanching and drying of button Mushroom (A*garicus Bisporus*) using microwave enhanced hot air heating system

Ipsita Das

Indian Institute of Technology- Bombay, India

Abstract

The objective of this study was to evaluate the feasibility of using microwave energy for blanching and dehydration of mushroom slices. The technology utilizes by applying microwave energy at the beginning of dehydration process to heat up the mushroom for simultaneous blanching and partial dehydration and then followed by hot air drying to accelerate the dehydration process. This technology does not involve the addition of steam or water for the blanching process and intended to be a replacement of steam/water blanching technique. The partial removal of the moisture during blanching makes the whole drying process more energy efficient than conventional method. Mushroom slices were pretreated with different microwave power levels of 240, 360, 480 Watt for 1, 3, 5 minutes before the hot air-drying. The influence of above parameters were studied on drying characteristics, colour, water activity and rehydration ratio of dried mushroom.

Keyword: Blanching, Dehydration. Microwave, Mushroom Slices

Biography

Ipsita Das did M.Tech. & Ph.D. from IIT Kharagpur in Food Process Engineering. She is presently working as Scientist in Department of Electrical Engineering, IIT Bombay. She has authored about 25 technical publications in peer reviewed journals and proceedings. She has published Two Book Chapters (Taylor and Francis Group & In Tech Publishing House) and Two Monographs with LAP LAMBERT Academic Publishing GmbH & Co, Germany. Her areas of research interest include Food Drying & Disinfestation.