Drying kinetics of ginger (*Zingiber officinale*) slices under going microwave drying

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■**ABSTRACT :** The drying characteristics of ginger slices were investigated in an experimental microwave dryer and modeled at 1.0, 1.5, 2.0 and 2.5 kW power levels. The entire drying process took place in the falling rate period. The effective moisture diffusivity values ranged from 2.5356×10^{-11} to 1.2678×10^{-9} m²/s within the power levels (1.0 to 2.5 kW) studied. Exponential, Page, Henderson and Pabis, Logarithmic and Power law models were applied and validated on the basis of determination of coefficient (R^2), reduced mean square (χ^2) of the deviation, mean bias error (E_{MB}) and root mean square error (E_{RMS}) between the observed and predicted values of moisture ratios. Page model was found to fit best, representing an excellent tool for estimation of the drying time and the values of R^2, χ^2, E_{RMS} and E_{MB} were in the ranged of 0.995 to 0.997; 0.0006 to 0.005; 0.022 to 0.038 and 0.005 to 0.009, respectively.

■**KEY WORDS :** Ginger, Moisture diffusivity, Modelling, Microwave, Falling rate, Moisture ratio

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