

Drying, colour and sensory characteristics of 'Berangan' banana (*Musa accuminata*) flesh dried using a microwave oven

ABSTRACT

The drying characteristics of 'Berangan' banana flesh dried under microwave heating were studied in this work. The produced microwave banana chip was then compared with the conventional deep oil fried banana chip in terms of colour and sensory characteristics. 'Berangan' banana slices with 3 mm thickness were dried using microwave at three power levels of 100, 440 and 1000 W. Shorter drying times were obtained when higher microwave power was applied during drying, where the drying times were found to be 30, 7, 4 min at 100, 440 and 100W. Three different drying models were used to describe the resulting drying curves. The drying rate constant increased from 0.298, 0.4211 and 0.2977 min⁻¹ to 1.8717, 1.9956 and 1.8936 min⁻¹ for the Newton, Page and Henderson and Pabis models when the microwave power used was increased from 100W to 1000W. The best model to represent the drying data obtained in this work was found to be the Page model. In terms of colour, fried banana had a browner, duller colour than microwave dried banana. For sensory evaluation, dried banana chips using microwave at a power level of 440W was the most preferable. It can be concluded microwave dried banana chips showed better results than fried banana chips in terms of colour and sensory characteristics in the range tested in this study.

Keyword: Berangan banana; Banana chips; Microwave drying; Colour; Sensory