

Examination of the Effect of *Spirulina platensis* Microalgae on Drying Kinetics and the Color Change of Kiwifruit Pastille

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Abstract

In this study, the effects of various concentrations of *Spirulina platensis* microalgae were investigated on drying kinetics and the color of kiwi pastille. *Spirulina platensis* was applied to the samples at three concentrations of 0, 0.5 and 1% and the samples were dried at 70, 80 and 90°C. Eight models of the entire drying thin layer models were fitted into the moisture ratios obtained during experiments. Coefficient of determination (R^2), Chi-square (X^2) and Root Mean Squared Error (RMSE) were used in order to choose the superlative model. Different concentrations of *Spirulina platensis* had no effect on drying process. As time increased, a^* showed ascending trends whereas L^* showed descending trend and these color changes were relatively more intensive at high temperatures. Among the fitted mathematical models, the Midlli was selected as the best one with R^2 of 0.9942.

Keywords: color parameter, drying kinetics, modeling, kiwi pastille, *Spirulina platensis*