

Title Thin-layer Drying Model for Rough Rice with High Moisture Content
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Abstract

Thin-layer drying tests were conducted for rough rice in the temperature range of 35–60°C with five relative humidities (10–50% relative humidity (r.h.)). A modified precision humidity generator was used as an experimental device for this study. The temperatures and relative humidities of the drying air were controlled by the mixing of two air streams. The goodness-of-fit of the observed values with four thin-layer equations was examined by a statistical regression technique. Correlation coefficients and residual plots were used as criteria for evaluating the goodness-of-fit. The two-compartment model with a two-term exponential function was found as the best fit to the experimental data and was recommended as the thin-layer model for rough rice. Four important drying constants of this model were quantified as functions of temperature and relative humidity of drying air.