Abstract

This paper presents a study of the mathematical modelling of green table olives (*Olea europaea* L. Domat variety) drying. Calibrated olive samples ($140–180 \text{ kg}^{-1}$) were used for the drying tests performed in the laboratory with various temperatures (40, 50, 60 and 70 °C) at a constant air velocity of 1.0 m s^{-1} and relative humidity of 15±2%. Drying to 5% (db) moisture content in the dryer took about 37.5, 24.0, 17.5 and 11.5 h at air temperatures of 40, 50, 60 and 70 °C, respectively. Thirteen different mathematical drying models were compared based on the correlation coefficient, root mean error, main bias error and reduced mean square of the deviation to estimate drying curves. It was concluded that a proposed drying model in this study could sufficiently describe convection drying of green table olives under the conditions studied.