Title Moisture Diffusion Coefficient of Amaranth Seeds determined by the Regular Regime Method

Author C. Martínez Vera, M.G. Vizcarra Mendoza, H. Espinosa and F. Caballero

Citation Biosystems Engineering. Volume 92, Issue 4, December 2005, Pages 439-443

Keyword pigweed; amaranthus; moisture diffusion

Abstract

In this work the dependence of moisture diffusivity of amaranth seeds on water concentration is studied. An expression for the moisture diffusion coefficient as a function of temperature and moisture content was determined departing from experimental drying curves obtained in a moisture chamber and employing the regular regime method developed elsewhere. A weak, but noticeable, dependence of this parameter on the moisture concentration was found. The diffusivity values obtained with the method applied in this work were similar to those previously reported and based on an Arrhenius-type expression for the moisture diffusion coefficient of amaranth seeds as a function of temperature.