

Title Effects of drying methods and conditions on drying kinetics and quality of Indian gooseberry flake
Author Siporn Methakhup, Naphaporn Chiewchan and Sakamon Devahastin
Citation LWT - Food Science and Technology Volume 38, Issue 6, September 2005, Pages 579-587
Keyword Ascorbic acid; Color; Low-pressure superheated steam drying; Page's equation; Vacuum drying

Abstract

Vacuum drying and low-pressure superheated steam drying (LPSSD) of Indian gooseberry flake (used to prepare Indian gooseberry tea) were carried out at various drying conditions to monitor the drying kinetics and quality degradation of the product during drying. In terms of drying kinetics, the vacuum drying took shorter time to dry the product than LPSSD at every drying condition. In terms of quality, it was found that only the product subjected to vacuum drying at 75 °C and absolute pressure of 7 kPa had similar level of ascorbic acid retention compared to those samples of LPSSD at every condition. The total color difference of this sample was, however, slightly higher than that of product dried by LPSSD. Nevertheless, since the color changes were not of much concern to the consumers of Indian gooseberry tea, vacuum drying at 75 °C and 7 kPa was proposed as the most favorable condition for drying of Indian gooseberry flake in terms of energy consumption.