Title Sulphur dioxide evolution during dried apricot storage

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Abstract

Sulphur dioxide is used as a pre-treatment to facilitate drying, improve product quality and extend the shelf life of apricots. During storage, SO_2 losses are observed, thus reducing the effect of this agent. The aim of this paper is to analyze the evolution of SO_2 content in dried apricots packaged in different types of containers, namely glass and polypropylene trays thermosealed with different films (oriented polyamide OPA + polyethylene PE and polyamide PA + polypropylene PP). The packaging atmosphere was air in all cases. Storage was carried out at constant temperature: 5, 15, 25 and 35 °C. Stored samples were analysed periodically over 12 months. In order to model the SO_2 losses, two empirical kinetic models were tested: these models assimilate this process to a first order irreversible and a first order reversible kinetics. The explained variance being higher than 94% in all cases, but only the reversible kinetics is able to depict the residual SO_2 observed.