Abstract

The sensory quality of extruded oat, stored in light and darkness in packages with different oxygen transmission rates (including the use of an oxygen absorber), was evaluated after 3 months of storage at 38 °C and 10 months of storage at 23 °C. To reduce the costly and time consuming shelf life and packaging evaluation, the possibility of reducing the number of sensory attributes to be analyzed and to accelerate shelf life testing was studied.

The intensity of oat odor, paint odor and crispiness were found to describe the main differences among the samples. By increasing the temperature from 23 to 38 °C for samples stored in darkness, packaging evaluation tests for extruded oat might be performed in approximately one third of the time. Changes in headspace oxygen concentration in the packages due to oxygen consumption were in agreement with the sensory changes in the oat.