Staling reduces quickly the shelf life of bread because of several phenomena, such as starch retrogradation and moisture migration from crumb to crust and from crust to atmosphere reducing drastically bread quality. The influence of packaging barrier properties plays an important role the quality of food.

The aim of this study was to evaluate hardness and moisture content in wheat bread packed in differed packaging materials. Wheat bread samples (bread slices 1 cm thick) were packed in following packaging materials: OPP, PE/PA, Multibarrier 60 (with/without Fe based O₂ scavenger). Control sample was vacuum packed while other samples – in modified atmosphere conditions. Texture analyses were conducted on the TA-XT2i Texture Analyzer; Stable Micro Systems and moisture content was determined by ISO 6496:1999. Bread samples were stored for 28 days.

The results show that the hardness of the control sample in the day before packaging was 4.143±0.179 N and during the period of storage it has increased to 15.523±1.876 N (Multibarrier 60 with O₂ scavenger) – with the longest storage time. At the beginning of the study, moisture content in the control sample was 33.81±0.10% while after 28 days – it was decreased to 28.10±0.50% (OPP).

It can be concluded that packaging material, physical properties of the material and environment were product was packed plays an important role in the quality of the product during the period of storage.

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