Novel trends in fresh meat packaging - permeability characteristics of synthetic polymer packaging materials

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Abstract (300 word limit)

Meat packaging objective is to control and optimise meat quality, to confirm meat hygiene and safety, to extend its storage stability, and directly result in lower the utilisation of preservatives throughout the storage. Furthermore, the improvement of fresh meat tenderness, minimizing its weight loss, ensuring the cherry-red colour in red meats at customer level, and the activity of enzymes processes in meat, have to be allowed by the proper packaging.

Modern biomedical challenges of meat products entail a series of complex processes designed to make certain the quality and safety of the meat for customers. Nanotechnology in meat packaging, vacuum skin packaging, emerged and have greatly developed in a broad number of research biomedical fields in relation to meat packaging and improvement of its nutritional value. This present a challenge of designing packaging materials by employing reverse engineering approach on the basis of requirements of food product besides on the availability of packaging materials.

Many meat packaging systems currently exist, each with different attributes and applications. Permeability properties of synthetic polymeric materials and their influence on the quality of packed fresh meat were investigated. Barrier properties of two different types of packaging films based on polypropylene were examined. It was shown that one of the films (BOPPAcPVDC) ensured better protection for fresh meat in terms of physicochemical, sensory and microbiological attributes, due to its appropriate permeability properties.

Recent Publications (minimum 5)

D. Daniloski, Temperature dependence of permeability of polymer films on different gasses. Case study: quality and safety evaluation (physico-chemical, sensory and microbiological analyses) of packaged fresh meat, MSs Thesis, 2017.

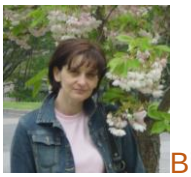
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A. Trajkovska-Petkoska et. al, *Dibbiopack* - multifunctional active packaging for food, cosmetics and pharmaceuticals, DIBBIOPACK- FP7-NMP-2011-LARGE-5, No. *280676*, 2012-2016.

A. Trajkovska-Petkoska, et.al, Surface engineering of polymers, *Protection of materials,* 55(1) 3-10, 2014.



Biography

Anka Trajkovska Petkoska is Full Professor at University St. Kliment Ohridski, Bitola, R. Macedonia. She has MSc in Novel Materials based on polymers from University St. Cyril and Methodius, Faculty of Technology and Metallurgy, Skopje, R. Macedonia and PhD in Chemical Engineering from University of Rochester, Chemical Engineering Department, Rochester, NY, USA. She was a Horton Fellowship at University of Rochester, 2001-2007. Dr. Trajkovska Petkoska is a member of many associations, and is an accredited mentor for postgraduate and PhD studies. She is also a consultant for partners from industry sector. Her scientific interests include but are not limited to: novel types of materials and technologies, surface engineering, composite materials based on polymers, nanocomposites and nanotechnologies, liquid crystals, thin films and coatings wih targeted functionality and application. She is author and co-author of many scientific works, three books as well as inventor/co-inventor of two US patents and two patent applications.

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