

International Conference on

Sustainable Bioplastics

November 10-11, 2016 Alicante, Spain

Comparison of barrier properties and water and acid solubility of films based on collagen

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Collagen is an animal protein, and in the human body its function is to contribute to the structural integrity of the tissue. In the last decades it has been widely used in the food industry and, within this, also in catgut. In this context, the aim of this study was to observe the solubility in water and acid, as well as the barrier properties of pure collagen films and those who have immerse in a bath with antimicrobial agents before use in meat sausages. The films were characterized for thickness, water vapor permeability (PWV) and solubility in water and acid. The use of bath with antimicrobial agents did not cause a change in the thickness of the films (0,122 mm). An increase can be observed when water vapor permeability was observed, films that have passed through the bath had an WVP 35, 73, and the films without the treatment showed a value of permeability of 26,03 g.mm/m².d.kPa. When solubility in water and acid difference was analyzed, were observed differences between samples. Both exhibit a decrease in value when they pass through the bath showing that the bath influences the solubility of the films. Thus, the use of the bath, although not cause difference in thickness causes an increase in the permeability to water vapor and a decrease in water and acid solubility of the films.

Biography

Cristina Tostes Filgueiras Graduated in Food Engineering from the Federal University of Viçosa (1992), Master of Agricultural Microbiology, Federal University of Viçosa (1996) and PhD in Food Science from the State University of Londrina (2009). It has experience in the field of Food Science and Technology and is currently Adjunct Professor III of the Federal University of Grande Dourados (UFGD) and Tutor Fellow Tutorial Education Program - PET / Food Engineering.

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