

APPLICATION OF BIOPROTECTORS IN MEAT INDUSTRY

Slavica Vesković Moračanin^{1*}, Srdjan Stefanović¹, Lazar Turubatović¹

¹Institute of Meat Hygiene and Technology, Kaćanskog 13, 11000 Belgrade, Republic of Serbia

*e-mail: slavica@inmesbgd.com

Abstract

Modern concept of food production and processing is based on application of various protective technologies with the aim to ensure and preserve product safety, as well as acceptable and unchanged product quality from the moment of production to the moment of consumption. From the other side, consumers show the need for the food that did not undergo extensive preservation processes and free from chemical preservatives. Such trend from one side (so-called «green technology») and continuous development of modern protective technologies in XX and XXI century induce the development and application of achievements in the field of bio-protection of food.

Growing needs for natural safe food led to increased interest for utilisation of bacteriocin-producing species of lactic acid bacteria (LAB), that are used in production of fermented products as protective cultures. The principle on which bio-protection is based is decreasing risk for the consumers by acting on undesirable spoilage bacteria or foodborne pathogens, preserving quality parameters at the same time.

This paper presents the part of long-term research carried out by the authors with the aim to define conditions for application of protective cultures and/or bacteriocins in meat industry during the manufacture of fermented sausages.

Leuconostoc mesenteroides ssp. *mesenteroides* IMAU:10231 has been isolated from traditionally fermented „sremska“ sausage, its antimicrobial properties were determined *in vitro*, and after the adequate preparation, bacteriocin was applied as additive in manufacturing the same sausage from which it was isolated. The results showed that traditional fermented sausage manufactured in this way is a safe product with certain quality parameters improved over the classical manufacturing process. At the same time, such production procedures contribute significantly in the area of novel methods for bioprotectors development, that should be further improved.

Key words: Food safety, Bacteriocins, Lactic acid bacteria, Meat industry.