

**PE4.119 Survive of the probiotic strain *Lactobacillus casei* ?OCK 0908 in a dry fermented meat products**  
**443.00**

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**Abstract-** In recent years much attention has been paid to beneficial influence of probiotics for human health. Probiotic bacteria were not applied in the meat products until now. The aim of this work was to examine the survive of the probiotic strain *Lactobacillus casei* LOCK 0908 in a dry fermented meat products. The scope and the methods of the study included preparation the inoculum of the probiotic strain *Lactobacillus casei* LOCK 0908 and the microbiology analysis. The results of this experiment affirmed that strain *L. casei* LOCK 0908 was characterized by good survive in a dry fermented meat products for example pork loin.

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**Index Terms-** dry fermentation, meat products, pork loin, probiotics, probiotic strain

### I. INTRODUCTION

The word 'probiotic' come from Greece (pro bios) and it means 'for life'. The term probiotics was used the first time in the 1960s, by Lilley and Stillwell. Contemporary definition was published by an Expert Consultation at a meeting convened by the FAO/WHO in October, 2001, which states 'probiotics are live microorganisms which when administered in adequate amounts confer a health benefit on the host' [1,2,3]. Mostly of probiotics belong to the group of Lactic Acid Bacteria (LAB). The genera *Lactobacillus* and *Bifidobacterium* are the most popular bacteria use to produce probiotic foods [3,4]. Lactic acid bacteria are useful for natural preservation of a fermented foods. Additionally fermentation by LAB create a specific taste, smell and color of this products, which consumers like very much [5,6]. Probiotics are an important ingredient of a healthy diet, therefore this microorganisms are used to produce a probiotic

products, which are included to functional foods. Currently the main raw materials to produce probiotic foods are: milk, vegetables and fruits. A new and interesting idea will be joining a dry fermented meat with an inoculations of the probiotic strain. Meat products with probiotics or prebiotics have a great future potential [3,7]. The aim of work was to examine the survive of the probiotic strain *Lactobacillus casei* LOCK 0908 in a dry fermented meats products, for example pork loins.

### II. MATERIALS AND METHODS

The study profile is outlined in Figure 1. The materials for a experiment was a probiotic strain *Lactobacillus casei* LOCK 0908 (patent number: P-382761) deposited in IET PAN and pork's loins. The range and the methods of a study included preparation the inoculum of the probiotic strain *Lactobacillus casei* ?OCK 0908; microbiology analysis, which aim was identification the number of probiotic bacteria (cfu/g). The analysis was carried out by automated quality solution- Tempo. In a experiment was used two kind of a control trials (with and without 0,2% glucose addition), trial with an inoculations of the probiotic strain *L. casei* LOCK 0908 and trial with probiotic strain both with extract of green tea. The kinds of trials used in a experiment are shown in Table 1.

### III. RESULTS AND DISCUSSION

The results of experiment are shown in Figure 2. The highest count of bacteria *Lactobacillus casei* ?OCK 0908 was obtained in a trial with probiotic strain and essence of green tea (7,57 +/- 0,22 log cfu/g) also in a trial with only probiotics addition (7,29 +/- 0,05 log cfu/g). The lowest number of probiotic bacteria was obtained in a control trials. The count of bacteria in both trial, with and without glucose was on the level 10<sup>5</sup> log cfu/g. In comparison to trials with other addition, the number of probiotic bacteria was lower by two logarithmic levels.

#### IV. CONCLUSION

This pilot study demonstrates that probiotic strain *Lactobacillus casei* ?OCK 0908 could be used to produce dry fermented loins. These interesting results shown us that meat products are a good medium probiotic bacteria.

#### ACKNOWLEDGEMENT

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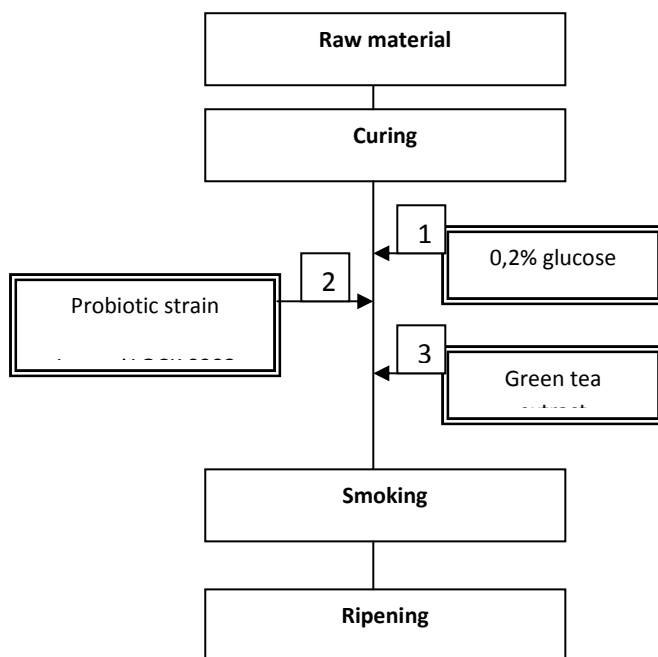
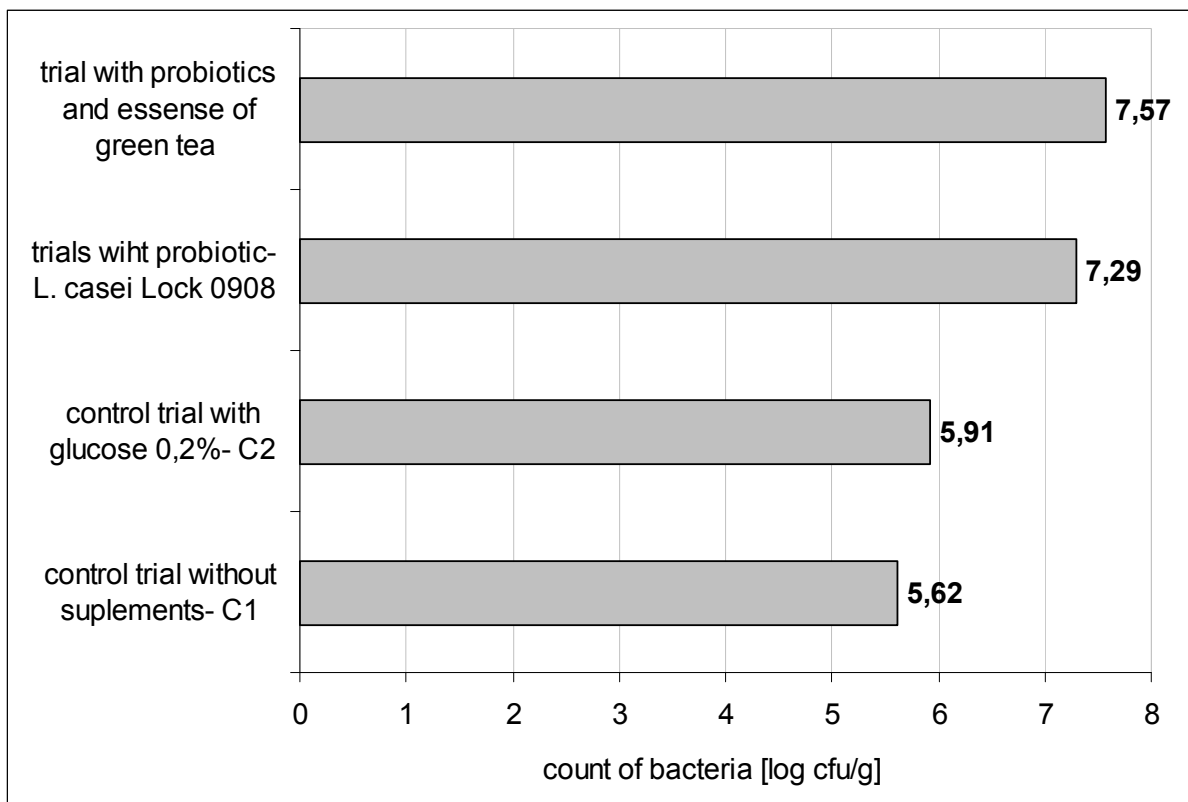


Figure 1. Outline of study profile

**Table 1.** Prospectus of trials used in a experiment

Kind of trials	Probiotic strain	Other additions
Control trial- C1	-----	-----
Control trial- C2	-----	Glucose 0,2%
Trial 3	<i>L. casei</i> LOCK 0908	-----
Trial 4	<i>L. casei</i> LOCK 0908	Extract of green tea 15ml/kg



**Figure 2.** Survive of the probiotic strain *Lactobacillus casei* LOCK 0908 in a pork loin in dependence of addition (glucose, green tea extract)