

## EFFECT OF AUTOCHTHONOUS STARTER CULTURES IN THE PRODUCTION OF “PAIO”, A TRADITIONAL PORTUGUESE DRY-CURED SAUSAGE

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**Abstract:** Traditional dry-cured sausages are highly appreciated in Mediterranean countries. The aim of the present study was to evaluate the effect of different starter cultures in the sausages 'microbiological safety and biogenic amines' content. Alentejano pig meat was used to prepare dry-cured sausages in a local factory. *Staphylococcus xylosus*, *Lactobacillus sakei* and a yeast strain were inoculated at a concentration of 10<sup>6</sup> cfu/g meat batter both in separate and in mixed culture. Three independent batches with two replicates per treatment were produced. Samples were collected throughout the ripening process. pH and a<sub>w</sub> were determined according to the ISO standards. Microbiological counts of total mesophiles, total psychrotrophs, anaerobes, coagulase-negative staphylococci (CNS), lactic acid bacteria (LAB), enterobacteria, yeasts and moulds and *Listeria monocytogenes* were done according to the respective ISO standards, as well as detection of *Salmonella* spp. Biogenic amines quantification was performed by HPLC as described by Roseiro *et al.* (1). The treatment with *L. sakei* alone was the most effective in reducing the contamination level both with *Salmonella* spp. and *L. monocytogenes*, however this effect seems to be lost in the mixed cultures. The presence of the yeast strain seems to increase the levels of β-phenylethylamine and histamine. The contents in cadaverine, putrescine and tyramine were generally lower in the inoculated sausages. Regarding tyramine, the treatments with *L. sakei* showed significantly lower values. No significant differences between treatments were observed for both spermine and spermidine.

**Keywords:** Traditional dry-cured sausages, starter cultures, Alentejano pig breed meat, food safety.

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[1] C. Roseiro, C. Santos, M. Sol, L. Silva, I. Fernandes. Meat Science 74(3), 2006, 557-563.

OC - 1411