

## Reduction in surface contamination of pork carcasses: an alternative process

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Microorganisms are present in the entire pork processing chain. Therefore, different forms of prevention and control during slaughter have been tested in order to reduce the microbial load of the carcasses surface, among them, especially the application of steam and/or organic acids. However, in Brazil and in the countries members of the European Community these practices are prohibited by the laws in force , that only authorize the use of physical decontamination methods with application of dry heat. Accordingly, a study was conducted to verify the potential for bacterial decontamination in employing a scorcher (equipment with nozzles that throw flames on the surface of carcasses) as the last step of the "dirty" area of the slaughter. Swabs were collected at the carcasses surface after the passage in two different types of slaughter procedures: the traditional, called "control", and the adapted, that contemplates another scorcher, called "test". The samples were collected with the use of sterile sponge, soaked in 0.1% peptone water plus 0.85% NaCl. In each carcass a total area of 400 cm<sup>2</sup> was assessed, following official methodology of the Ministry of Agriculture Livestock and Supply. After collection (30 carcasses for each process), the swabs were immediately sent to the laboratory for carrying out the strict and facultative aerobic mesophilic micro-organisms detection analysis, following traditional methods of cultivation of the American Public Health Association. Microbiological analyzes were performed in triplicate for each case and the results were expressed in Unit Forming Cologne (CFU) / cm<sup>2</sup> sample. The microbiological results indicated a significant reduction of about two log cycles when the slaughter called "test" was performed, in comparison to "control". This shows that the use of dry heat at the final stage of the "dirty" area of the pork slaughter can set up as an alternative effective methodology in reducing the microbial load of the carcasses surface, consisting in a cheap, simple and safe adaption to routine.

**Keywords:** Microbiological analysis, dry heat, methods of decontamination, sanitary quality.