Selection of *S. equorum* and *S. xilosus* isolates from Portuguese fermented dry sausages to be used as starters


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Traditional Portuguese smoked/dry fermented sausages are characterized to have in their process a spontaneous fermentation with strains that are present in workshops environment and main ingredients. This confers particular sensorial characteristics and protection against spoilage microbiota. The main objective of this work was to isolate, characterize and select *Staphylococci* from smoked/dry fermented meat sausages, from South region of Portugal, in order to use them as starter strains. *Staphylococci* isolates (n=37) from six traditional sausages in different processing steps (batter just stuffed, product with half period of ripening and final product) from workshops A, B and C, were identified for *S. aureus*, *S. epidermidis*, *S. xylosus* and *S. saprophyticus* using a multiplex PCR described by Morot-Bizot *et al.* (2004). The identification of *S. equorum*, *S. carnosus* and *S. simulans* was performed by PCR according to Blaiotta *et al.* (2004 and 2005). Subsequently was made the technological characterization of the isolates testing their nitrate reductase, lipolytic and proteolytic activity. Antagonistic activities against *Enterococcus avium* EA5 were also tested. *S. equorum* and *S. xylosus* were found to dominate the staphylococcal microbiota in the spontaneously fermented sausages. *S. equorum* was mostly present in products from workshop C. All the *Staphylococcus* isolates presented lipolitic activity and 81% were able to reduce nitrate, none were proteolytic. *S. equorum* CH2C5 strain presented the highest nitrate reductase activity and a good lipolytic activity. *S. xylosus* P3B1 was found to have an intermediate nitrate reductase activity and a good lipolytic activity. The staphylococcal microbiota was not found to be able to produce antimicrobial compounds against EA5.