Assessment of high hydrostatic pressure and starter culture on the quality properties of low-acid fermented sausages

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Abstract

The addition of starter culture and high pressure processing after ripening improved the microbial quality of low-acid fermented sausages (fuet and chorizo). The use of \textit{Lactobacillus sakei} CTC6626 and \textit{Staphylococcus xylosus} CTC6013 as starter culture significantly reduced \textit{Enterobacteriaceae} and \textit{Enterococcus} levels in the finished sausages. Moreover, the addition of starter culture produced sausages of similar quality to traditional low-acid fermented sausages. Slightly lower pH values and higher cohesiveness were obtained for both fuet and chorizo with starter culture. Sensory analysis showed no differences between lots of chorizo whereas starter fuet was more acid and gummy. High pressure induced an additional reduction of \textit{Enterobacteriaceae} in non-starter sausages. An increase of textural properties was observed after pressurization. No other differences were observed between non-treated and pressurized sausages.

Keywords: Low-acid fermented sausages; Traditional sausages; Starter culture; High pressure processing