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## Effects of *Lactobacillus sakei* S15 and *Staphylococcus xylosus* GM92 on volatile compounds and sensory characteristics of heat-treated sucuk

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In this research, effects of *Lactobacillus sakei* S15 and *Staphylococcus xylosus* GM92, isolated from sucuk, a traditional Turkish dryfermented sausage, on volatile compounds and sensory characteristics of heat-treated sucuk (semi-dry fermented sausage) were investigated. Three different heat-treated sucuk groups (control, *L. sakei* S15 and *L. sakei* S15+*S. xylosus* GM92) were produced under controlled conditions. The profile of volatile compounds were analyzed by gas chromatography/mass spectrometry (GC-MS) using a solid phase microextraction (SPME). Samples were taken from the batters, after fermentation (48 hours at 22 °C), heat-treatment (inner temperature at 68 °C) and drying stages. Sensory analysis was carried out on the final product. A total of 66 compounds (9 sulfur compounds, 3 alcohols, 4 ketones, 7 aliphatic hydrocarbons, 6 esters, 8 aldehydes, 6 aromatic hydrocarbons, 1 furan and 22 terpenes) were identified from sucuk samples. Use of *L. sakei* S15 or *L. sakei* S15+*S. xylosus* GM92 showed very significant or significant effects on 14 volatile compounds. Some volatile compounds occurred during the heat treatment stage. Significant increases were observed in the amounts of volatile compounds in drying stage. *L. sakei* S15+*S. xylosus* GM92 showed a higher sensory score than the control and *L. sakei* S15 in terms of color.

## **Biography**

Guzin Kaban has received her PhD degree from University of Ataturk in 2007. She is currently a Professor in Department of Food Engineering at the same university. She has more than 30 articles published in academic journals scanned by SCI and SCI-Expanded. She has been working on traditional Turkish meat products and is a co-author of six chapters in four published books. Her studies have predominantly focused on the lactic acid bacteria and coagulase negative staphylococci, as well as volatile compounds of traditional Turkish meat products. She is also a Member of Advisory Commission on Meat Products, Republic of Turkey, Ministry of Food, Agriculture and Animal Husbandry.

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