PORK SAUSAGES FORTIFIED WITH VARIOUS CONCENTRATIONS OF LAVENDER ESSENTIAL OIL: MICROBIOLOGICAL AND SENSORIAL PROPERTIES

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Abstract

Several essential oils (EOs) can be used as natural alternatives to synthetic food additives in meat and meat products, especially as effective antibacterial agents. This study investigated how different levels of lavender essential oil (LEO) affected the microbiological and sensory properties of smoked pork sausages. Bacterial growth was followed for 9 days, including tests on days 3, 6, and 9. The smoked pork sausages were divided into two groups: the control group (C) without lavender essential oil and the test group (T) fortified with (0.2%, 0.5%, 1%, 1.5%, 2%, 2.5%, and 3%). The APC and coliform counts indicated that lavender essential oil (LEO) enrichment of smoked sausages has high inhibition of APC and coliform. The lowest minimum inhibitory concentrations (MIC) were obtained with *L. Angustifolia* (0.2%) against both microorganisms. Both EOs caused a significant decrease in bacterial growth in smoked pork sausage stored for 6 and 9 days. Moreover, the results showed that the addition of EO significantly prolonged the odor of smoked pork sausage even at abusive temperature. However, the use of lavender essential oil (LEO) is partially limited due to its intense aroma, which may have negative organoleptic impact. Further studies are needed to enhance the sensory impact of samples enriched with lavender essential oil (LEO).

Key words: (spoilage bacteria, quality, meat products, smoked sausages)