

EFFECT OF SALT REDUCTION ON THE SAFETY AND STABILITY OF TRADITIONAL BLOOD DRY-CURED SAUSAGES

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Abstract: Health issues such as cardiovascular disease are often due to dietary habits. Thus, meat industry needs to reduce salt in their products. However, production of low-salt content dry-cured sausages must ensure not only safe and stable products, but also that consumers' acceptability is not affected. The current study evaluated the effect of salt reduction from 6% to 3% in two Portuguese traditional blood dry-cured sausages. Physicochemical and microbiological parameters, biogenic amines content, fatty acids profile, texture profile analyses and sensory panel evaluations were considered. Differences due to salt reduction were noticeable in a faint increase in water activity, which slightly favoured microbial growth, with the highest yeasts numbers found in 6% salt sausages. Total biogenic amines content ranged from 224.72 to 1302.81 mg kg⁻¹ dry matter, with higher amounts, particularly of cadaverine, histamine and tyramine, in low-salt products. Still, histamine remained at low levels, consequently not affecting consumers' health. Regarding fatty acids, no significant differences were observed due to salt content. However, texture profile analysis revealed that low-salt products showed lower resilience and cohesiveness, even though no textural changes were observed by the panellists. Nevertheless, low-salt sausages were clearly preferred. Still, taking the safety of these traditional meat products into account, the results obtained for pH, a_w and biogenic amines, have shown that a reduction in salt content should be accompanied by complementary safety measures, such as the use of starter cultures to minimise microbiological and chemical risks.

Keywords: biogenic amines, microbiological parameters, food safety, sensory attributes.

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