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Assessment of the stability of sheep sausages with the addition of different concentrations of *Origanum vulgare* extract during storage

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ABSTRACT

The aim of this study was to assess the stability of sheep sausages with the addition of different concentrations of *Origanum vulgare* extract during storage. Five treatments were prepared: without natural antioxidant (control), sodium erythorbate 500 mg/kg (ER), and three amounts of extract (N1=4964.51 mg/kg, N2=6630.98 mg/kg and N3=8038.20 mg/kg). From appearance sensory analysis, control treatment differed significantly compared to ER ($P<0.05$) and N3 ($P<0.01$) groups, with intense red color, agreeing with trend of a^* values. On the other hand, oregano extract improved the lipid and protein stability of cooked sausages during the storage time. Regarding volatile compounds from lipid oxidation, the N2 group presented the lowest values at the end of chilled period. In conclusion, the oregano extract showed antioxidant potential equivalent to sodium erythorbate at intermediate and high levels, calculated by DPPH' and FRAP methods, and most of the parameters were not compromised, allowing synthetic antioxidants replaced while maintaining the nutritional and sensory quality of cooked sausages.

Keywords: free fatty acid, meat product, oxidative stability, *Origanum vulgare*, sensorial analysis, volatile compounds

1. INTRODUCTION

Meat and meat products are important sources of high quality protein. Their acceptance by consumers depends mainly on the percentage of fat, which is responsible for ensuring taste and

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