ANTIMICROBIAL ACTION OF THE ESSENTIAL OIL OF *MIRYSTICA FRAGANS* BACTERIA IN ISOLATED FROM PORK


Essential oils are volatile substances, pure and extremely potent, extracted from plants, constituting the raw material of great importance for the food industry, due to its antimicrobial and antioxidant action. Nutmeg (*Mirystica fragans*) has in its composition myristicin, an antimicrobial agent, which can be used as a natural additive for food. The research aimed on evaluating the antimicrobial potential of essential oil of nutmeg in isolated bacteria from pork.

The essential oil extraction was carried out by steam distillation obtaining a final concentration of 35% from an initial mass of 100g, which was considered positive due to the low total concentration of oil present in the nutmeg sample. Microorganisms were isolated from pork and inoculated in specific media. After the growth of microorganisms biochemical tests were carried out for confirmation of the strains. The antimicrobial tests were performed by the distafusion test, using the antibiotic doxycycline as control. The inhibition zone was considered satisfactory if >10mm. The results were positive for the bacteria *Salmonella* sp (zone 12mm), *Staphylococcus aureus* (zone 15mm) and *Clostridium perfringes* (zone 14mm), but they were not effective against *E. coli*. Thus the essential oil of nutmeg can be used as an additive in the manufacture of meat products in order to increase the shelf life of the product.