

TITLE: BACTERICIDE ACTIVITY OF ESSENTIAL OILS OF *Pimenta dioica* Lindl. (PIMENTA DA JAMAICA) E *Ocimum basilicum* (MANJERICÃO).

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ABSTRACT:

The medicinal plants properties are directly related to their essential oils, which are a complex mixture of various active substances, including terpenes, which are formed by isoprene units and fenilpropano derivatives. This fact has aroused interest in the use of these species and their essential oils in the control of the growth of pathogenic and spoilage in food, in order to replace or reduce the use of chemical preservatives. This essay evaluated the antibacterial activity of the essential oils of *Pimenta dioica* Lindl. and *Ocimum basilicum* front of strains ATCC of *Escherichia coli* e *Staphylococcus aureus*. Extracted quantitatively essential oils by hidrodestilação. Through the technique of gas chromatography coupled to mass spectrometry (GC/MS), it was possible to characterize the major components of this oil. The antimicrobial activity was evaluated by the Disk Diffusion Method (DDM) and Minimum Inhibitory Concentration (MIC) using essential oils extracted front the strains of *E. coli* e *S. aureus*. The essential oils of *O. basilicum* and *P. dioica* present income, respectively, of 0,38% (m/v) and 1,80 % (m/v). It was observed the bactericidal action of two essential oils front of strains *E.coli* and *S. aureus*. In Disk Diffusion Method, the diameters of the inhibition halos were observed in 25 mm for *S. aureus* and 15 mm for *E. coli* front of the essential oil *P. dioica* and 20 mm for *S. aureus* and 18 mm for *E. coli* front of the essential oil *O. basilicum*. The Minimum Inhibitory Concentration test performed as MIC 25 µg. mL⁻¹ for the action of the essential oils tested in this study. Bactericidal activity was assigned to senior constituents methyl chavicol in *O. basilicum* and eugenol at *P. dioica*, identified by GC/SM. The results indicate that essential oils are composed of substances that provide antimicrobial activity against bacteria, and can be subsequently used the results in this research in the application of these oils in the food industry.

Keywords: medicinal plants; essential oils; *O. basilicum*; *P. dioica*.