



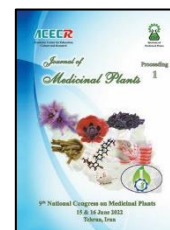
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### A Comparative Study of the Antimicrobial Effect of Thyme and Peppermint Essential Oils and Selective Antibiotics Against *Staphylococcus Aureus* Isolated from Poultry Eggs

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#### ABSTRACT

*Staphylococcus aureus* is one of the main causes of food-borne illnesses [1]. Since the bacterial resistance to the chemical medicines has increased, nowadays the medicinal plants have been the focus of attention [2]. The aim of this study was to investigate the effect of thyme, peppermint essential oils on *S. aureus* isolated from poultry eggs. *S. aureus* strains were isolated from industrial eggs in Ardabil city, northwest of Iran. The essential oil of the plants used was obtained with a Clevenger Apparatus. Minimum lethal concentration and minimum inhibitory concentration were determined by microdilution method. Ampicillin, tetracycline, streptomycin, gentamicin and vancomycin were used as positive control and Antibiotic resistance of isolates was determined using agar disk diffusion method (Bauer-Kirby). After measuring the circle made out of them, the results were studied. All strains of *S. aureus* at concentrations of 1.56 mg/ml were inhibited by both thyme and pepper. The lowest lethal concentration of (3.12 mg / ml) for thyme and peppermint has inhibited one- and two-way, respectively. The results showed that thyme and peppermint essential oils inhibit the growth of *Staphylococcus aureus*. So, these medicinal plants with emphasis on antimicrobial activity of themselves, can replace chemical drugs to treat infections caused by *Staphylococcus aureus* bacterium [1,2].

#### References

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