



Assalam International University

Faculty of Pharmacy

Antimicrobial Activity of Essential Oil of *Rosmarinus officinalis*

**Project Submitted for Partial Fulfilment of Requirement
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ABSTRACT

This study investigates the antimicrobial activity of essential oils derived from *Rosmarinus officinalis* (rosemary). Fresh aerial parts of these plants were collected from various locations in Libya during August 2024. The oils were extracted through steam distillation, and their antimicrobial properties were assessed against a range of bacteria and fungi. Using the disk diffusion method, the essential oils were tested against both Gram-positive and Gram-negative bacteria, as well as fungi. The results showed that the essential oil of *R. officinalis* exhibited significant antibacterial activity, particularly against *Pseudomonas aeruginosa* and *Escherichia coli*. The inhibitory effects were comparable to standard antibiotics like vancomycin and levofloxacin, with the essential oil showing a minimum inhibitory concentration (MIC) of 1.6 µg/ml against *Pseudomonas aeruginosa*. This suggests that *R. officinalis* essential oil has promising antimicrobial potential, making it a valuable candidate for further research and possible therapeutic applications.