

IN-VITRO SCREENING OF ANTIBACTERIAL POTENTIAL OF ESSENTIAL OIL OF LEMON GRASS (*CYMBOPOGON CITRATUS*)

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ABSTRACT: Essential oils obtained from plants are well known for their bioactivities and uses in pharmaceuticals, aromatherapy, food preservation etc. One of the most important benefits of using these oils is their antimicrobial activity which may help in prevention of severe infections caused from several pathogens. Lemon grass is one of the most promising plants which provide the oil possessing great antimicrobial activity. The current study was done to investigate the effect of essential oils of lemon grass on various pathogenic bacteria (*Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa* and *Bacillus subtilis*). Essential oil was obtained by steam distillation method. Agar well diffusion and turbidity measurement methods were used to test the inhibitory potential. The results obtained shows that the essential oil of lemon grass exhibited best inhibitory effects on *Staphylococcus aureus* which indicates that this oil can be used as a remedy for such infections. Growth inhibition was seen in case of *Escherichia coli* and *Bacillus subtilis*. No inhibition was seen in the growth of *Pseudomonas aeruginosa*.

Keywords: Essential oils, agar well diffusion method, turbidity measurement method, inhibitory effect.

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