

## Anti-microbial activity of different parts of Neem tree

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This paper describes the preliminary study carried out to determine the anti-microbial effect of different parts of neem tree such as young shoot, leaves, bark, seed and root. Disc diffusion method was used to study the anti-microbial activity of different parts of neem tree on *Klebsiella pneumoniae*, *Escherichia coli*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Micrococcus roseus*, *Citrobacter freundii*, *Saccharomyces cerevisiae* and *Aspergillus oryzae*. Discs were impregnated with either 20 or 60 $\mu$ l of extract of different parts of neem tree. The bacteria and yeast were cultured in nutrient agar medium while fungus was cultured in potato-dextrose agar medium. The bacterial cells or fungus spores were spread evenly on the surface of the medium and the extract impregnated discs were laid on the surface of the medium at particular distance. The plates were incubated in an incubator at 30°C for fixed time (24h for bacteria and 36h for yeast and fungi). The clear zone present around the disc was measured. *K. pneumoniae* gave clear zones of 6, 8, 10, 10 and 7mm diameter around disc containing 60 $\mu$ l extract of young shoots, leaves, bark, seed and root respectively. *E. coli* gave clear zones of 9, 8 and 10mm diameter around disc containing 60 $\mu$ l extract of young shoot bark and root respectively. *S. aureus* gave clear zones of 12, 12, 11, 0 and 13mm diameter around disc containing 60 $\mu$ l extract of young shoots, leaves, bark, seed and root respectively. *P. aeruginosa* gave clear zones of 8, 8 and 7mm diameter around disc containing 60 $\mu$ l of extract of leaves, bark and seed respectively. *M. roseus* gave clear zones of 8, 11, 6, 0 and 7mm diameter around disc containing 60 $\mu$ l extract of young shoots, leaves, bark, seed and root respectively. *C. freundii* gave clear zone of 4mm diameter around disc containing 60 $\mu$ l extract of leaves. *S. cerevisiae* gave clear zones of 6, 8, 6, 5 and 6mm diameter around disc containing 60 $\mu$ l extract of young shoots, leaves, bark, seed and root respectively. *A. oryzae* gave clear zones of 6, 8, 6, 0 and 6mm diameter around disc containing extract of young shoot, leaves, bark, seed and root respectively. This study clearly indicated the presence of anti-microbial substances in neem tree.