

Research Title : Effect of parts of *Cleome viscosa* crude extracts on antibacterial and antioxidant activity test

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## ABSTRACT

The bioactivity studies from the weed ethanolic crude extracts from leaf, stem, pod and root of wild spider flower; *Cleoma viscosa* Linn. were analyzed for the inhibition of the growth of microorganism with initial concentration crude extract 50 mg/ml using 6 bacterial species; *Streptococcus epidermidis* ATCC 1228, *Staphylococcus aureus* TISTR 1466, *Bacillus subtilis* ATCC 6633, *Pseudomonas aeruginosa* ATCC 27853, *Escherichia coli* DMST 4212 and *Salmonella typhimurium* TISTR 5562. The agar well diffusion results were found that the extracts inhibit only gram positive bacteria species; *S. aureus*, *S. epidermidis* and *B. subtilis*. The minimum inhibition concentration study revealed that the lowest concentration of leaf crude extract at 0.39 mg/ml give the best result to inhibit the growth microorganisms with *B. subtilis*, 0.78 mg/ml with *S. epidermidis*, and 1.56 mg/ml with *S. aureus*, compare with other plant parts crude extract. The determination of total phenolic compounds in the crude extracts exhibited the highest phenolic content was 10.41 mg GAE/g dry weight in leaf crude extract. Analyzed the efficacy of free radical scavenging by using DPPH radical scavenging assay showed value of IC50 of leaf, stem, pod and root crude extracts were 8.32, 12.26, 21.62 and 35.99 mg/ml, respectively and the highest antioxidant activity found in leaf crude extract at concentration 12 mg/ml.

**Keywords :** *Cleoma viscosa* Linn., antimicrobial, antioxidant activity, total phenolic compound