

Qualitative Phytochemical Screening and Antibacterial Evaluation of Sohphlang: *Flemingia Vestita*

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Abstract : *Flemingia vestita*, commonly known as 'Sohphlang' is an important medicinal plant found in the North-Eastern region of India, which is traditionally recognized for its anthelmintic properties. This study was aimed to evaluate the phytochemical constituents and antibacterial activity of the tuber skin extracts of the plant species. Methanol, acetone, and water were used to obtain the solvent extractions of the skin peel extracts. Concentrated extracts of skin peel were tested using previously established qualitative phytochemical assays. The antibacterial efficacy of methanol tuber skin extract was tested against Gram-negative and positive microorganisms, namely, *Klebsiella pneumonia*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Bacillus subtilis*, and *Mycobacterium tuberculosis* strains. Agar well diffusion method was employed to determine the zone of inhibition of the plant extracts. Obtained data were statistically analyzed. Methanol extracts of *Flemingia vestita* were found to be effective against *Bacillus subtilis* and *Mycobacterium tuberculosis* at concentrations of 0.5 mg/ml. The reported zone of inhibition for the two strains was $13.3\text{mm} \pm 0.57$ and $16.3\text{mm} \pm 4.9$, respectively. However *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Escherichia coli* were resistant to the plant extracts with no zone of inhibition. Alkaloids, glycosides, and phenols were found to be present in aqueous, methanol, and acetone extracts of the plant in qualitative phytochemical analysis.

Keywords : *flemingia vestita*, antibacterial activity, phytochemical screening, well diffusion method

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