



## Effect of Lime and Farmyard manure on the Concentration of Cadmium in *Ipomoea aquatica* along with its Antimicrobial and Phytochemical analysis

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**Abstract :** *Water spinach* is considered native to Africa, Asia, and the southwestern Pacific Islands. Phytochemical analysis on *Ipomoea aquatica* was carried out using standard methods. The result revealed the presence of alkaloid, flavonoid, glycosides, phenol, protein, steroid, saponin, tannin in the leaf extract of the plant. Antibacterial assay was carried out for the ethanol extract by disc diffusion method. In disc diffusion method maximum zone of inhibition was noticed for *Escherichia coli* and less for *Staphylococcus aureus*. Application of lime and farmyard manure reduces the

concentration of cadmium uptake by plant grown in cadmium contaminated soil.

**Keywords :** *Ipomoea aquatica*, antibacterial, phytochemical.

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### Introduction :

*Ipomoea aquatica* has many medicinally and economically significant phytochemicals. The plant being a source of nutrition also consist of cadmium in traces (Austin 2007) . In this work objective was to analyse the presence of alkaloid, flavonoid, glycosides, phenol, protein, tannin and steroid phytochemicals. It has been reported to have antibacterial activities against two stains of bacteria, which were *Escherichia coli* (gram –ve) and *staphylococcus aureus* (gram +ve). The antibacterial activity was observed by disc diffusion method. The study was made on the ethanolic extract of plant. The antibacterial property is due to phenolic compound (Chandra and Shamli, 2015).