

ABSTRACT

The two hydrophytes were investigated for their ethno-botanical potentials by exploring their antimicrobial, antioxidant and anthelmintic activities. Macerations was done with different solvents. Both of these plants were exposed for their phytochemical analysis that revealed that leaf of these hydrophytes had shown excellent amount of phytochemicals, as *Eichhornia crassipes* (Mart.) Solms contain 60.81 gE mg/100g anthocyanin, 5.502 β -cE mg/100g carotenoid, 221.15 RE μ g/g flavonoid and 222.6 GAE μ g/mL phenols. While *Pistia stratiotes* L. contain to the maximum 55.472 gE mg/100g anthocyanin, 5.145 β -cE mg/100g carotenoid, 214.29 RE μ g/g flavonoids and 176.53 GAE μ g/mL phenols. The aqueous extract of *Eichhornia crassipes* (Mart.) Solms and ethanolic extract of *Pistia stratiotes* L. had proved to be most effective against most of bacterial strains. Flower part of both of these plants seems to have good antimicrobial activities. The aqueous extract of *Eichhornia crassipes* (Mart.) Solms had exhibited satisfactory activity specially against the bacterial strains *Pseudomonas aeruginosa*. The antioxidant activities recognized that *Eichhornia crassipes* (Mart.) Solms demonstrated IC_{50} 17.78 (DPPH scavenging assay), $134.42 \pm 0.71 \mu$ M/mL TE μ M/mL (FRAP), 94.93 ± 0.41 % lipid peroxidation (FTC), 90.12 ± 0.65 % metal chelating and 96.18 ± 0.35 AE μ g/mL Total antioxidant effectiveness of *Pistia stratiotes* L. provided comparable potency with IC_{50} 13.14 (DPPH scavenging assay), 94.83 ± 0.71 TE μ M/mL (FRAP), 94.18 ± 0.57 % lipid peroxidation (FTC), 96.29 ± 0.59 % metal chelating and 90.97 ± 0.43 AE μ g/mL total antioxidant capacity. For both of hydrophytes a dose dependent anthelmintic activity had observed and flower of both plants had shown satisfactory enthelmintic activity. Conclusively, being hydrophytes all activities of both hydrophytes under investigated were comparable in most aspects but none of all.