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Qualitative and Quantitative Analysis of Phytochemical Studies on *Chara sp.*

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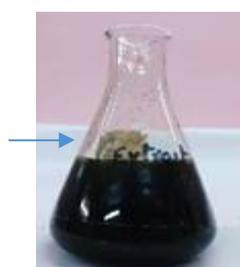
ABSTRACT

In the secondary metabolites i.e., phytochemicals have been extensively investigated as a source of the medicinal agents. The sample for the study of constitutes *Chara braunii* from the family Characeae. It was collected from the river Mahananda at Malda. Four completely different solvent extracts of genus *Chara braunii* were subjected to qualitative and quantitative phytochemical analysis of secondary metabolites each by preliminary phytochemical screening tests of 10 different chemical compounds alkaloids, terpenoids, steroids, tannins, saponins, flavonoids, phenols, coumarins, quinones and glycosides. The result of phytochemical screening of the *Chara braunii* showed in the presence of alkaloids, terpenoids, steroids, tannins, flavonoids, phenols, coumarins, quinones and glycosides besides the absence of saponins. Among the tested four different extracts showed that the presence of maximum number of compounds i.e. nine compounds in ethyl acetate, methanol extracts showed seven compounds, hexane extracts showed six compounds and acetone extracts only four compounds. However, the estimation of total phenolics, tannins and flavonoids were observed in different extracts of *Chara braunii*. The quantitative analyses of the various phytochemicals showed that the secondary metabolites such as phenolics (2.14 ± 0.15 mg GAE g^{-1} dry wt.) and flavonoids (1.72 ± 0.05 mg RUE g^{-1} dry wt.) in high amounts in methanol extract, where as tannins showed high amounts (2.12 ± 0.45 mg CAE g^{-1} dry wt.) in ethyl acetate extract.

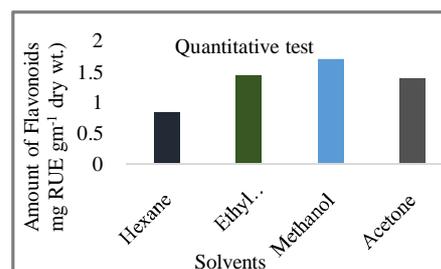
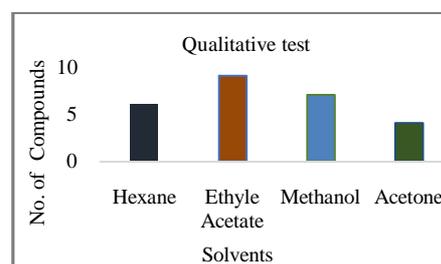
Graphical Abstract



Collected Specimen
(*Chara braunii*)



Extract



Keywords: *Chara braunii*, Secondary metabolites, Phytochemical, Solvents.
