
***Qualitative & quantitative phytochemicals evaluation of
Euphorbia hirta linn. leaves extracts for antioxidant activity***

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Abstract:

Euphorbia hirta Linn. Belongs to the family Euphorbiaceae and is widely known for its medicinal properties and extensively used globally. E.hirta leaves have been investigated for qualitative & quantitative evaluation such as microscopical, physical, and qualitative as well as quantitative evaluation of essential phytoconstituents inclusive of overall phenolic content, flavonoid content & antioxidant potential. This study aimed to screen the antioxidant potential of Hydro alcoholic, Ethyl acetate, and Acetone extracts of E.hirta Linn. Extracts (EH-HA, EH-EA, and EH-AC respectively). The results of 2, 2-diphenyl-1-picrylhydrazyl (DPPH) radical scavenging assay and lipid per oxidation inhibition assay confirmed that EH-EA turned into the strongest antioxidant ($IC_{50} = 95.05 \pm 0.01 \mu\text{g/ml}$) compared to EH-HA ($IC_{50} = 261.83 \pm 0.01 \mu\text{g/ml}$) & EH-AC ($IC_{50} = 318.40 \pm 0.01 \mu\text{g/ml}$) extracts. Our study results endorse that E.hirta Linn. Extracts possess tremendous antioxidant activity. Results show that this plant might be an awesome supply of natural antioxidants and a probable pharmaceutical complement. The various 3 analyzed extracts; EH-EA extract has the strongest activities and must be used to decide the phytochemicals and mechanisms of these activities.

Keywords:

E.hirta Linn., Antioxidant activity. Physio-chemical analysis, phytochemicals screening, hydro alcoholic extract, ethyl acetate extract, acetone extract.