QUANTIFICATION OF PHYTOCONSTITUENTS OF THE LEAVES OF *PAEDERIA FOETIDA* BY HPTLC METHOD

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About the Plant

Paederia foetida Linn. (Rubiaceae), known as Gandha-prasarini, is found in the Himalayan regions of India and recommended for the treatment of rheumatism, as an anti-inflammatory and a good hepatoprotective. Plant is reported to contain asperuloside, paederoside and scandoside.

Objective

Main objective is to quantify important markers (asperuloside[1,2], beta-sitosterol[2,3] and lupeol[2,3]) in the leaves

Extraction

Successive solvent extraction using Pet. ether, chloroform, acetone and alcohol was done in Soxhlet unit. Aqueous extract was prepared by maceration.

Phytochemical screening (leaf)

Pet. Ether extract – Steroids and fixed oils.

Chloroform extract – Alkaloids

Acetone extract – Phenolic compounds

Alcohol extract – Phenolic compounds, alkaloids, irridoids and flavonoids

Aqueous extract – Phenolic compounds, irridoids, flavonoids and carbohydrates

HPTLC estimation of Asperuloside in *Paederia foetida*

Sample – 10 mg/ml of methanolic extract of leaf

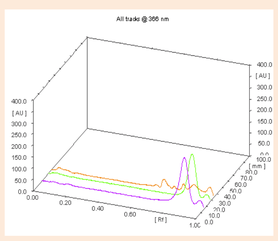
Standard – 1µg/ml of Asperuloside

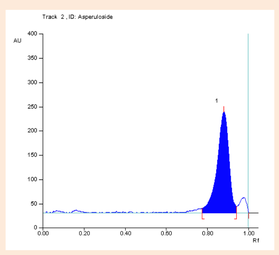
Solvent system – Chloroform : Methanol : Water (6:6:1)

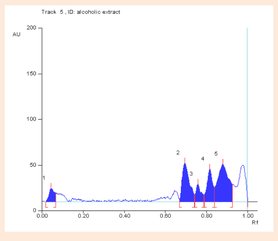
Spray reagent – 10% Methanolic sulphuric acid

Scanning wave length – 366 nm

The percentage content of Asperuloside in leaves of *Paederia foetida* was found to be 0.09504 % w/w.







HPTLC estimation of β–sitosterol and Lupeol in *Paederia foetida*

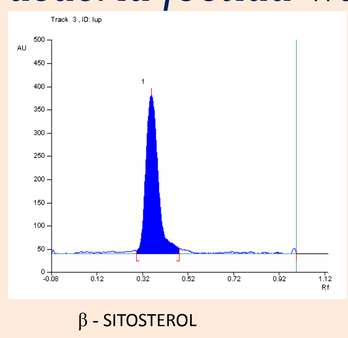
Standard-β-sitosterol & Lupeol – 2 µg/ml

Solvent system – Benzene : Ethyl acetate (9:1)

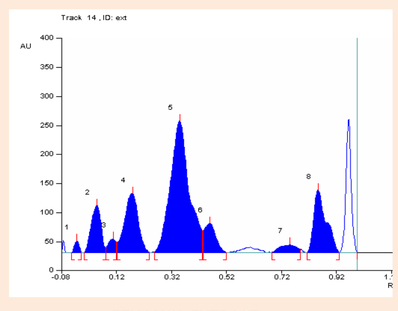
Spray reagent – 10% Methanolic sulphuric acid

Scanning wave length – 560nm

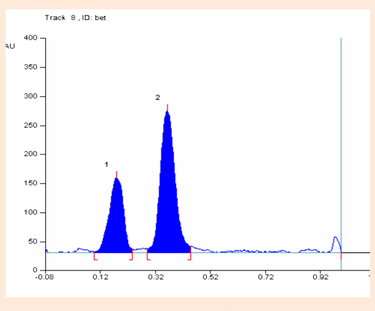
The percentage content of β-sitosterol and Lupeol in leaves of *Paederia foetida* was found to be 0.183 and 0.1507 % w/w.



β - SITOSTEROL

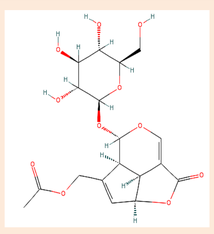


ETHANOL EXTRACT

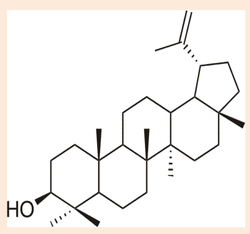


BETA SITOSTEROL & LUPEOL

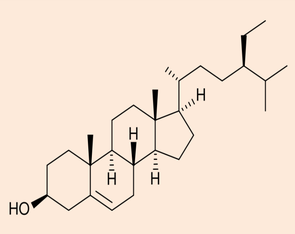
Compounds identified



Asperuloside



Lupeol



Beta Sitosterol

Conclusion

Phyto constituents were qualitatively indentified in the leaves of *Paederia foetida*

Quantification of three major phyto constituents viz. Asperuloside, β-sitosterol,lupeol was done by HPTLC method

References

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