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FLUORESCENCE ANALYSIS OF *ECLIPTA PROSTRATA* (LINN.) LINN.

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ABSTRACT

Herbs have always been the principal form of medicine in India. Medicinal plants have curative properties due to the presence of various complex compounds that are bioactive in nature. *Eclipta prostrata* is one such plant that belongs to family Asteraceae. It is commonly called bhringaraja & is acrid, bitter, hot and dry, reduces kapha and vaata and is a good rejuvenator. It is good for the hair and skin, expels intestinal worms, cures cough and asthma and strengthens body. So this study was undertaken to detect the presence of bioactive molecules with the help of fluorescence analysis & this can be used in standardization of the plant material.

KEY WORDS: *Eclipta prostrata*, Asteraceae, bioactive, fluorescence analysis, standardization.

INTRODUCTION

The herb of *Eclipta prostrata* Linn. is commonly called as False Daisy or Bhringaraja or Maka belonging to the family Asteraceae. *Eclipta prostrata* Linn is Annual, erect, branched often rooting at the nodes; stem and branches stirgose with appressed white hairs. (Almeida,

2001) The plant is bitter acrid, thermogenic, alterative, anti-inflammatory, anthelmintic, anodyne, vulnerary, ophthalmic, digestive, carminative, haematinic, diuretic, aphrodisiac, trichogenous, deostruant, depurative & febrifuge (Kirtikar & Basu 2006). It is useful in hepatosplenomegaly, elephantiasis, inflammations, gastropathy, anorexia, heminthiasis, skin diseases, wounds, ulcers, ophtalmopathy, fever, jaundice, otalgia & cephalalgia (Kapoor 1990). It is good for blackening & strengthening of the hair, for stopping haemorrhages & fluxes, and for strengthening the gums. The seeds are good for increasing sexual vigour (Varier et al, 2010).

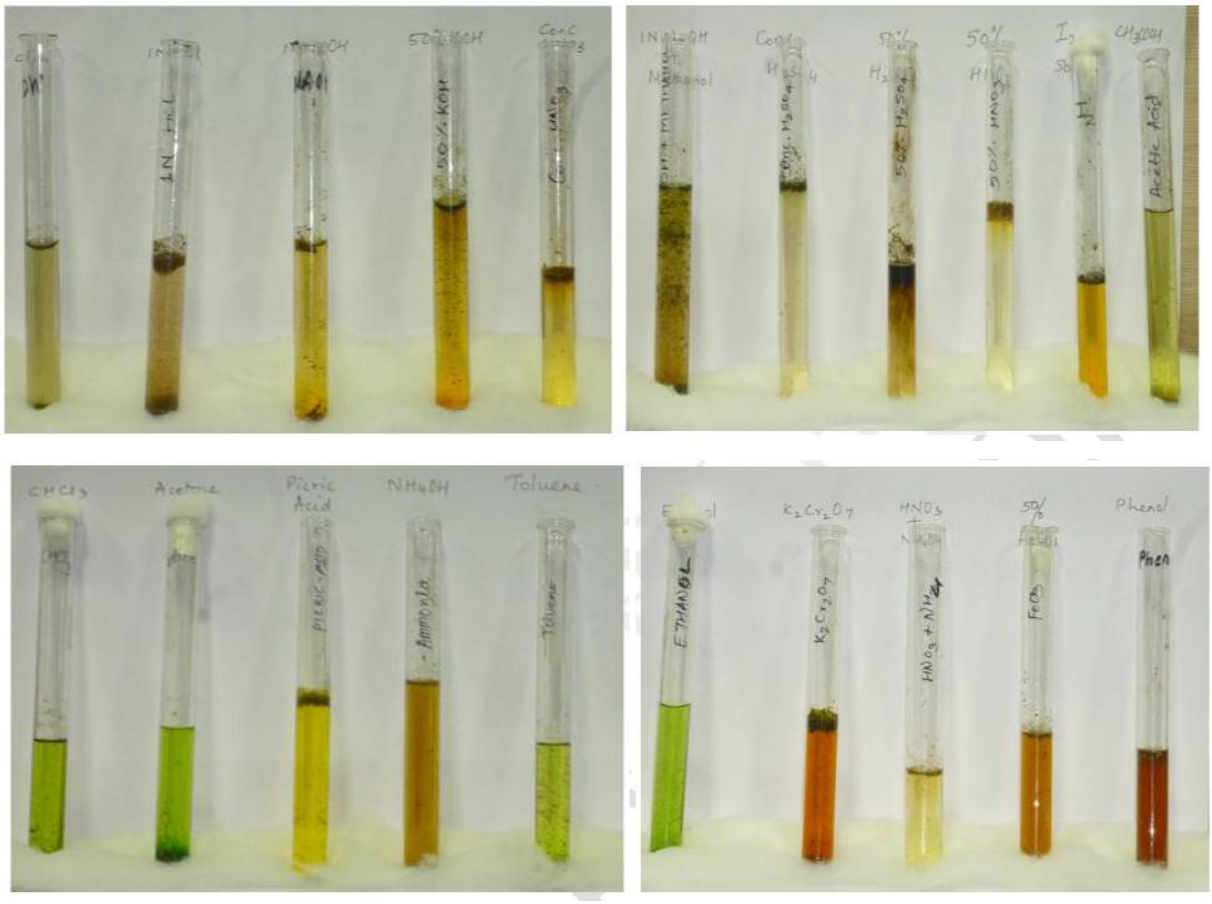
MATERIAL AND METHODS

The fresh plant material of *Eclipta prostrata*. was collected from Aarey colony Goregaon, Bandra and Tilak Nagar and other places in and around Mumbai & authenticated. The method used for the analysis is as given by Chase & Pratt, 1949.

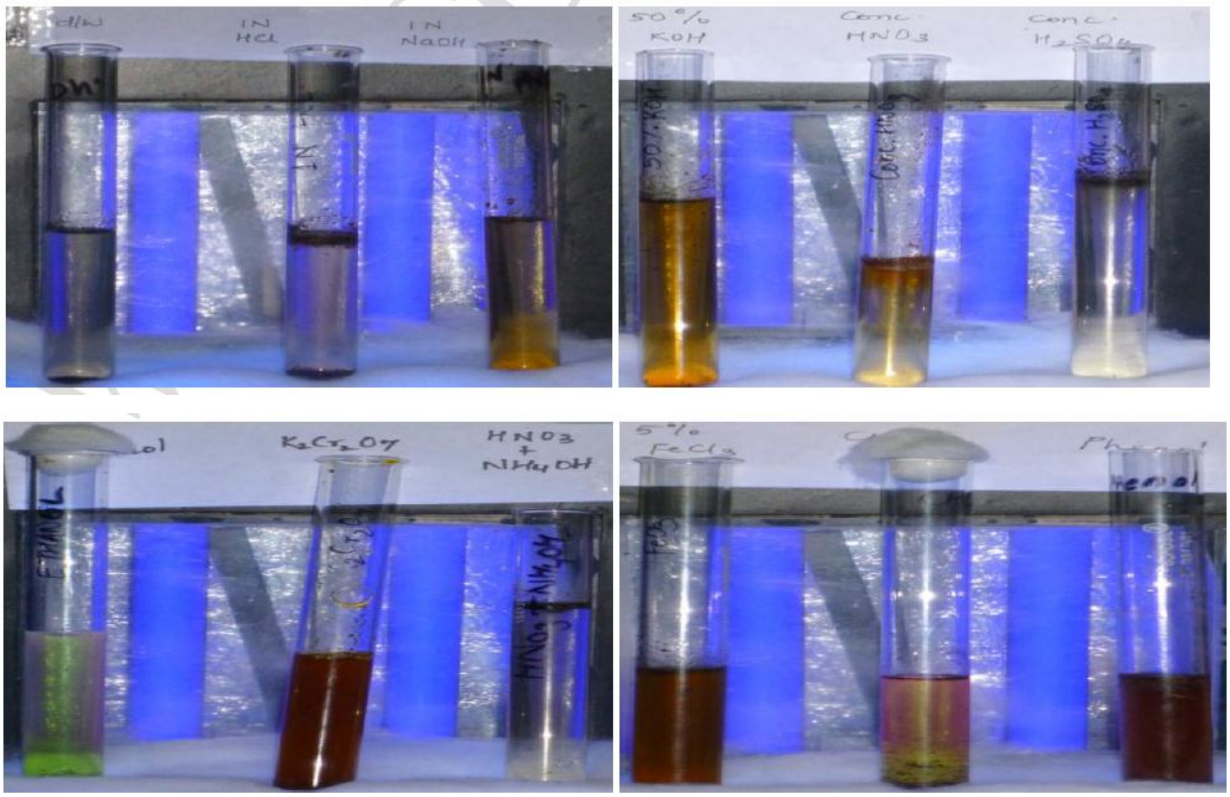
Flourescence analysis of powder of *Eclipta alba* Hassk.

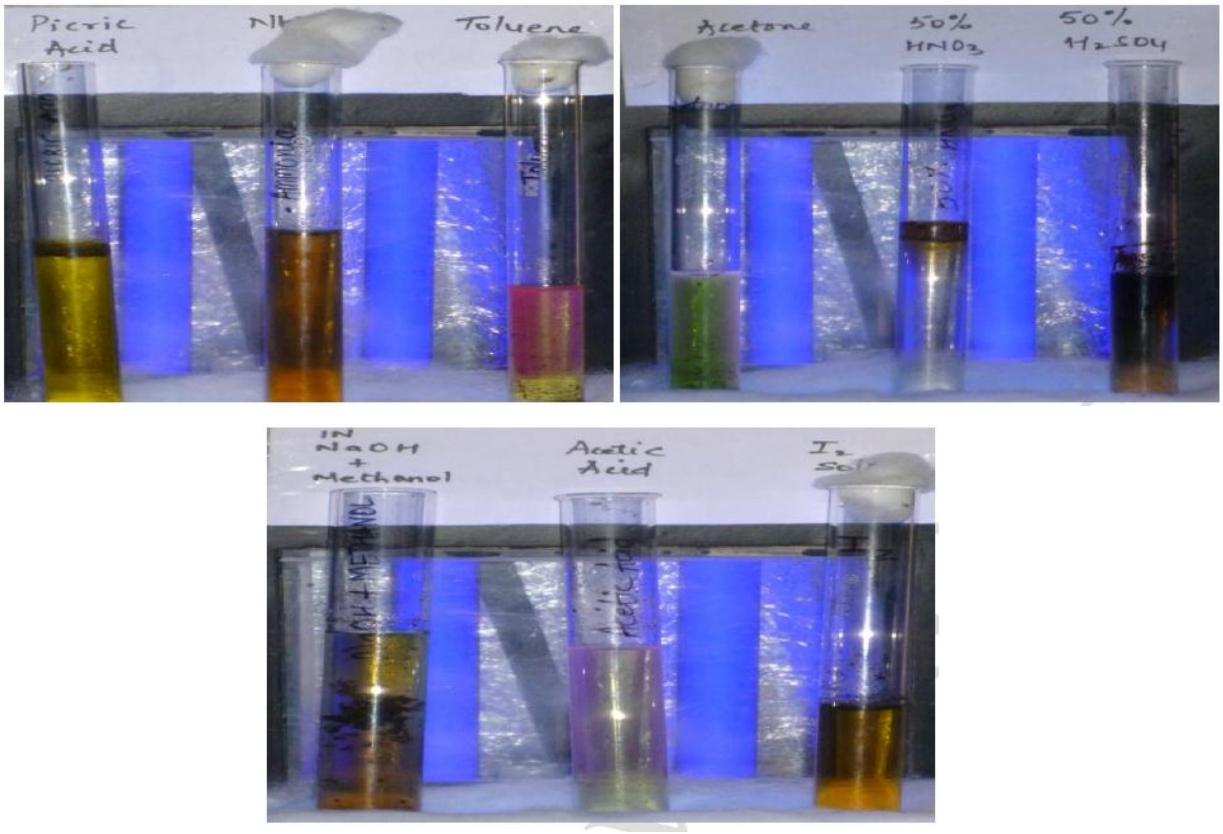
Powder + reagent	Visible light	U.V. light
1N HCl	Light brown	Colorless
1N NaOH	Light yellow	Dark yellow
1N NaOH + Methanol	Greenish yellow	Light yellow
50% KOH	Pale yellow	Orange
50% H_2SO_4	Brown	Dark brown
Conc. H_2SO_4	White	Colorless
Conc. HNO_3	Pale yellow	Yellow
Acetic Acid	Light green	Florescent pink
50% HNO_3	Light yellow	Colorless
Iodine solution	Yellow	Dark yellow
Distilled water	Light green	Grey
$CHCl_3$	Green	Florescent pink
Acetone	Dark green	Florescent green
Picric acid	Yellow	Florescent yellow
Ammonia	Light brown	Light orange
Ethanol	Light green	Florescent green
Toluene	Light green	Florescent pink
$K_2Cr_2O_7$	Light orange	Blood red
HNO_3 + NH_3	Off white	Colorless
5% $FeCl_3$	Light brown	Dark brown
Phenol	Light red	Dark red

IN VISIBLE LIGHT



IN UV LIGHT





CONCLUSION

Fluorescence is the phenomenon shown by various chemical constituents present in this plant material. The light absorbed and remitted radiations by the various solvents can be used for the identification of the powdered drug Evans (2002). Standardization is essential measure for quality, purity and sample identification. Fluorescence analysis of leaves and stem confirm the presence of bioactive molecules in them. They can be used to check the quality and purity of plant and its identification. Here the information collected is useful for further pharmacological and therapeutical evaluation along with the standardization of plant material. Vaidya, 2016 has also carried out fluorescence analysis of *Musa paradisiaca* leaves & also in *Luffa acutangula* fruit, 2016.

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