

Pharmacognostical characterization of three medicinal plants, *lantana wightiana*, *premna tomentosa* (verbenaceae) and *synedrella nodiflora* (asteraceae)

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Abstract

Very little information is available about the pharmacognosy of *Lantana wightiana*, *Premna tomentosa* and *Synedrella nodiflora*. The aerial part powder of these plants and their extracts in various solvents were examined under ordinary light and also under Ultra-Violet light. These powders were also treated with various chemical reagents and the changes in color were recorded. Further, the percentage of loss of weight on drying, total ash, water-soluble ash, acid-insoluble ash, and their residue on ignition were recorded following Pharmacopoeia of India Methods. The percentage of extractive values in petroleum ether, benzene, chloroform, methanol and water extracts of the plants were also determined. The fluorescence analyses of the aerial parts of *L. wightiana* show almost the same UV fluorescence characters when viewed under UV light. An orange fluorescence was noticed under UV light in petroleum ether extract of *L. wightiana*. A brown at the centre and orange fluorescence at the edge of the extract is noticed for *P. tomentosa* powder with 1N ethanolic NaOH and shows similar fluorescence when they viewed under UV light. *S. nodiflora* powder shows a characteristic orange fluorescence for petroleum ether and benzene extracts of *S. nodiflora*. Loss of weight on drying is high *S. nodiflora* and similar kinds of results are also observed for total ash, water-soluble ash and residue on ignition contents. Acid-insoluble ash content was higher in *S. nodiflora* than by *L. wightiana* and *P. tomentosa*. Maximum extractive value obtained for *L. wightiana* in methanol and water extracts of both *P. tomentosa* and *S. nodiflora*.

Keywords: Medicinal plants, areal parts, Pharmacognostical characters, Solubility, Fluorescence

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Biography:

Jesu Antony Martin Rath, Ph.D. is an Associate Professor of the Department of Chemistry, St. Mary's College since the June 1988. Over the past 19 years, Dr. Martin Rath's research efforts have been dedicated to interdisciplinary, integrated approaches to understanding how plants can be utilized for pestiferous insects and pathogens management. Dr. Martin Rath has over 20 scientific papers published. Dr. Martin Rath organized a seminar on phytochemistry She has attended and presented 28

and 6 research papers in conferences, respectively. From 14.5.2013 – 30.5.2013 she underwent a DST sponsored training on Bionanomaterials for pest and disease management. Since June 2016 onward she has been heading the department of chemistry. Dr. Martin Rath has operated a research project funded by MES, Govt. Of India as co-PI. He has guided and supervised 02 Ph.D. scholars and 05 B.Sc. students.