

Assessment of phytochemicals and antioxidant activities of raw and germinating *Ceiba pentandra* (kapok) seeds

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The objective of this study was to determine the consequence of germination on phytochemical constituents and non-enzymatic activities of *Ceiba pentandra* seed extracts. The levels of phytochemical constituents tested are influenced by germination and showed increase except two constituents they are alkaloids and tannins, which are decreased significantly during germination. Among Non-enzymatic antioxidants like DPPH, FRAP, reducing assay and hydroxyl radicle scavenging activity all showed improved activity compared with non-germinating seeds, this may be due to, during germination, various reactive oxygen species (ROS) are generated as by products of metabolism. This group of ROS includes superoxide radicals (O_2^-), hydrogen peroxide radicals ($H_2O_2^-$), and hydroxyl radicals (OH \cdot). The formation of these oxygen radicals results in the accumulation of lipid hydroperoxides by radical chain oxidation via phospholipids peroxy radicals within membranes. Therefore, it was hypothesized that this could be related to the increase of antioxidant activity in large unilamellar vesicles observed in germinated seeds. The implication of this query is that the *Ceiba pentandra* seeds as natural antioxidant agents and put forward the possibility of employing for therapeutic potential.

Biography

Ch.Ravi Kiran completed M.Phil in Department of Biochemistry, Andhra University and now he is pursuing his Ph.D in the same department. He Published more than 10 research articles in reputed journals.

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Formulation and validation of anti-dandruff hair emulsion of *Azadirachta indica*, *Pongamia glabra* and *Semicarpus anacardium* oil

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Dandruff is a condition of scalp characterized by an incising in the rate of shedding of head epidermal cells without any sign of inflammation. Main causes of dandruff are abnormal keratinization of epidermal tissue, excessive lipid due to abnormal internal secretion, and abnormal proliferation of scalp bacteria. So the present study mainly focuses on the development, evaluation and validation of Antidandruff hair emulsion of *Azadirachta indica*, *Pongamia glabra* and *Semicarpus anacardium* oil. The present work deals with the collection of all above oil and then subjected to identification by chemical analysis & quantitative estimation through thin layer chromatography. Antimicrobial activity studies reveals that *Azadirachta indica* & *Pongamia glabra* in 10% v/v concentration each & *Semicarpus anacardium* oil in 0.05% v/v in 5:5:0.05 proportions showed optimum antidandruff activity, hence included in final formulation. Different formulae for emulsion were tried. Formula 3 considered best amongst all. Formula 3 was optimized to 3F1, 3F2, 3F3, 3F4. From the results obtained, 3F3 batch was selected as best optimized batch which showed optimum pH, good stability, physical properties, homogeneity & spreadability. The emulsion showed pseudoplastic flow, good thixotropy, and diffusion graph shows release of drugs upto 6 hours, passes stability and accelerated stability studies. The formulation was validated by ICH guidelines and finalized.

Biography

Rupali P. Dandade has completed Bachelor of Pharmacy from Smt. Kishoritai Bhojar College of Pharmacy, Kamptee and currently pursuing Master of Pharmacy from Sharad Pawar college of Pharmacy, Nagpur. She attended three national conferences and workshop on Experimental Design. She is also persuing certificate course in Pharma Regulatory Affairs from Bioinformatics Institute of India, Noida.

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