

Fabrication of A Cryo-Ultrafine Grinding Machine For Getting Nano Size Medicinal Plant Material And Its Comparative Study Of Safety And Efficacy With Normal Particle Size (85 Mesh) Material Used In Traditional Indian Medicines.

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Key words: (Cryo ultrafine grinder, wound healing, nano plant powder, *Hiptage benghalensis*)

Abstract

Traditional Indian Medicines have played an indispensable role in the prevention and treatment of diseases in India. The pharmacological effects of Traditional Indian Medicines are not only due to the special chemical components, but the form of dosage as well. The particle size of medicinal materials is an important physical property that affects

pharmacological behaviors such as dissolution, chemical stability, and bioavailability of solid dosage forms. Nano size medicinal plant particles in modern medicine have proved to have enhanced efficacy. However very few reports on the efficacy of nano herbal medicines are available in literature.

In order to avoid deterioration of thermally labile phytoconstituents a special cryo-ultrafine grinding machine was fabricated. Plant nano particles thus obtained was characterized using SEM.

*Comparative safety and efficacy studies of conventionally used 85 mesh plant powder and plant nano powder of *Hiptage benghalensis* bark were conducted for excision wound healing activity in rats. Plant nano powder exhibited comparable wound healing property with synthetic standard and ethanolic extract of plant bark but better wound healing property than the conventionally used 85 mesh particles.*