

Standardization of microencapsulation process of volatile oil of *Azadirachta indica*

■ KALINDRI VERMA AND MEENU SRIVASTAVA

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■ **ABSTRACT :** *Neem* oil microcapsule gel was successfully prepared with wall material including gelatin and gum Arabic using coacervation technique by the researcher as an outcome of standardization of microencapsulation process of volatile oil of *Azadirachta indica*. An essential oil is the volatile lipophilic component extracted from plants. The use of medicinal plants is a universal phenomenon. The plant *Neem* belongs to the big mahogany family of Meliaceae and the genus *Azadirachta* of *A. indica*. The diverse biological activities of *Neem* essential oils can be applied on a large scale as antioxidant, antimicrobial agents comprising many important benefits including their volatility, lower level of risk to the environment than with synthetic ones. Findings of the study revealed that best results of microcapsules formation using *Neem* oil were obtained when the ratio of oil:gum:gelatin was kept 2:4:4, at optimized 50°C temperature having initial pH 4.5 and final pH 9.5.

■ **KEY WORDS:** Standardization, Micro-encapsulation, *Azadirachta indica*, Essential, Oil

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See end of the paper for authors' affiliations →

MEENU SRIVASTAVA

Department of Textiles and Apparel
Designing, College of Home Science,
Maharana Pratap University of
Agriculture and Technology, UDAIPUR
(RAJASTHAN) INDIA