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Patent Search

Invention Title	A METHOD FOR DECIPHERING THE PRESERVATION AND STABILIZATION OF CHLOROPHYLL IN ZNO INCORPORATED GELATIN NANOCOMPOSITE FILMS
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Abstract:

ABSTRACT A METHOD FOR DECIPHERING THE PRESERVATION AND STABILIZATION OF CHLOROPHYLL IN ZnO INCORPORATED GELATIN NANOCOMPOSITE FILMS The present invention describes a method for Deciphering the Preservation and Stabilization of Chlorophyll in ZnO incorporated gelatin nanocomposite Films. In the present invention, preservation of chlorophyll is carried out in flexible gelatin film to maintain its structural and functional integrity. To enhance the self-life of chlorophyll loaded gelatin film ZnO NPs are incorporated in film. ZnO NPs have been prepared by co-precipitation and characterized by using different techniques PXRD, FTIR, HR-TEM and Zeta Potential. PXRD and FTIR analysis confirmed the successful formation of nanoparticles. Negative Zeta potential value of NPs suggested that nanoparticles exhibit good colloidal stability. Interaction ZnO nanoparticles with gelatin protein have been analyzed by Fluorescence spectroscopy which shows that there is remarkable quenching occur in gelatin after increase in percentage of ZnO nanoparticles. Surface morphology of chlorophyll loaded ZnO-gelatin nanocomposite film has been examined by optical microscope image and SEM. From thermogravimetry, it is evident that thermal stability and mechanical resistance of gelatin film is slightly increased after incorporation of chlorophyll and nanoparticles. The degree of swelling in chlorophyll encapsulated gelatin film is higher than pure gelatin film. The higher swelling ability of chlorophyll encapsulated gelatin films is related to high hydrophilicity of chlorophyll encapsulated gelatin film. Dated this 8th day of June 2023 AMITY UNIVERSITY Name of Applicant Signature: Name: R. Adm. R.C. Kochhar (Retd.)

Complete Specification

DESC:FORM 2
THE PATENTS ACT, 1970
(39 of 1970)
&
The Patent Rules, 2003

COMPLETE SPECIFICATION
(See section 10 and rule 13)

TITLE OF THE INVENTION
"A METHOD FOR DECIPHERING THE PRESERVATION AND STABILIZATION OF CHLOROPHYLL IN ZnO INCORPORATED GELATIN NANOCOMPOSITE FILMS"

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