U18BTP7701 Project Work Phase I(Review Zero)

Synthesizing Nanoparticles from Agro-waste for food-based Application

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OBJECTIVE

The objective of this study is to explore and develop an efficient method for synthesizing nanoparticles from Agro-waste materials, with a particular focus on their potential applications in the food industry. The primary goals are to:

- Investigate and select suitable agro-waste sources with high potential for nanoparticle synthesis.
- Characterize the synthesized nanoparticles using advanced analytical techniques to assess their physicochemical properties and structural integrity.
- Evaluate the antimicrobial and antioxidant properties of the synthesized nanoparticles to determine their efficacy in preserving food products and enhancing food safety.
- Compare the performance of the agro-waste derived nanoparticles with conventional food additives to assess their feasibility and potential economic benefits.