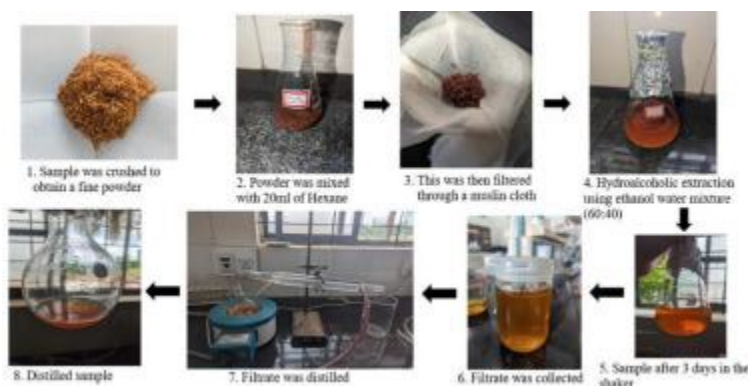


Standardization of cordyceps militaris extract according to industrial standards

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Standardizing *Cordyceps militaris* extract according to industrial norms is crucial for advancing natural product research. Despite extensive studies on its bioactivity and chemical makeup, a gap remains in the standardization process. This study addresses this gap by implementing a comprehensive methodology involving hydroalcoholic extraction, antibacterial assessment, antioxidant evaluation, phenolics quantification, protein and carbohydrate estimation, and GC-MS analysis. Our approach involved systematic hydroalcoholic extraction, followed by standard microbiological assays to assess antibacterial properties. The antioxidant capacity was measured using the DPPH assay, while phenolics, proteins, and carbohydrates were quantified using established analytical techniques. GC-MS analysis provided detailed chemical profiling of the extract. The results demonstrated notable antibacterial activity against specific bacterial strains, suggesting significant therapeutic potential. Additionally, the extract exhibited substantial antioxidant capacity, highlighting its potential to combat oxidative stress-related conditions. The phenolics estimation indicated a rich polyphenolic content, contributing to the extract's bioactivity. Comparative analysis with existing literature confirmed the efficacy of our standardized extraction protocol. In conclusion, this study significantly advances the standardization of *Cordyceps militaris* extract, laying the groundwork for its industrial application in pharmaceuticals, nutraceuticals, and cosmeceuticals. Future research should focus on optimizing extraction protocols, exploring new applications, and conducting clinical trials to validate efficacy and safety. This work represents a pivotal step towards the widespread utilization of *Cordyceps militaris* extract in various industries.



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Biography

Anagha J Acharya, a student from R V College of Engineering, possesses a genuine love for learning and collaboration. With a focus on wet lab skills and research, she thrives in challenging environments, displaying adaptability and patience. Anagha's research area lies in nutraceutical development and natural products research, where she aims to make meaningful contributions to health and well-being. With her strong academic foundation and dedication to excellence, she is poised to excel in her academic and professional endeavors and I am Prarthana Ullur, a dedicated biotechnology student from RV college of Engineering ,with a strong passion for research, particularly in the areas of food-based research, nutraceuticals, and pharmaceuticals. My academic journey has equipped me with the knowledge and skills necessary to contribute to scientific exploration and innovation in these fields. I am committed to advancing my expertise and making meaningful contributions to the health and well-being sector through rigorous research and practical application.

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