

Extraction of Hydroxycitric Acid from Dried Kokum Rind and Its Evaluation

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ABSTRACT

Introduction: Hydroxycitric Acid (HCA), a key bioactive compound in *Garcinia indica* (kokum), is widely studied for its potential in weight management, lipid metabolism, and antioxidant properties. Extracting HCA efficiently from dried kokum rind is crucial for its application in the food and nutraceutical industries.

Aim: This review explores various extraction methods of HCA, their efficiency, and its evaluation for functional applications.

Methods: Traditional solvent extraction, ultrasound-assisted extraction, and supercritical fluid extraction are compared based on yield, purity, and sustainability. Analytical techniques such as high-performance liquid chromatography (HPLC) and spectrophotometry are highlighted for HCA quantification.

Results and Discussion: Studies suggest that extraction efficiency depends on solvent type, temperature, and processing conditions. HCA demonstrates anti-obesity, anti-inflammatory, and antioxidant potential, making it valuable for food fortification and pharmaceutical applications. However, stability and bioavailability remain challenges, requiring further research into formulation strategies.

Conclusion: Optimising eco-friendly extraction techniques and improving bioavailability can enhance the commercial viability of HCA from kokum. This review provides insights into technological advancements, challenges, and prospects for its application in functional foods and nutraceuticals.

Keywords: Hydroxycitric acid, *Garcinia indica*, Functional foods, Nutraceuticals

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