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Biopolymer chitosan: Potential sources, extraction methods, and emerging applications

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Abstract

Food manufacturing generates a considerable amount of leftovers. Garbage disposal could cause environmental and ecological issues. Nevertheless, it is often possible to convert waste into high-value usable goods. Researchers have combed through natural wastes and discovered substances that could be re-utilised to address the issues. One of the materials discovered in marine waste is chitin, which could be transformed into chitosan. Chitosan is a natural biopolymer derived from chitin, which is non-toxic, biodegradable, and biocompatible. Therefore, chitosan has a wide range of possible applications. Moreover, chitosan has been widely acknowledged to be an effective biomaterial in a variety of ways. This review aims to examine more closely the primary sources of chitosan, extraction methods, and applications. © 2023 THE AUTHORS

Author Keywords

Applications; Biopolymer; Chitin; Chitosan; Waste

Index Keywords

Biocompatibility, Biomolecules, Biopolymers, Extraction; Emerging applications, Extraction method, Food manufacturing, Marine waste, Natural biopolymers, Natural wastes, Non-toxic, Potential sources, Primary sources, Source extraction; Chitosan

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