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The present perspective and future of chitosan based bio-films

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Nowadays researchers are showing great attention towards the natural polymer or biopolymer based materials such as chitin, chitosan and cellulose. Major reason after this growing interest are the desired properties possessed by such biopolymers including biodegradability, biocompatibility, nontoxicity, antimicrobial features. Production of chitosan based biofilms have been reported in many articles along with their possible applications in several fields such biomedical, food preservation etc. The modification of chitosan film depend upon the nature of application where they are supposed to be applied. Nowadays researcher are focusing more on the production chitosan active food packaging with good barrier, antioxidant and antimicrobial properties. These modification can be achieved by introducing certain active compounds such as plant extracts, essential oils and fruit extracts. Beside its application in food industry, chitosan films can be used as anti-biofilm drug carrier for wound healing where a prolonged release can be achieved. Keeping all these present application areas. In the field of biomedical these films can be used as coating materials for all the appliances which are using in high temperature areas. This chitosan coating will help in protection of such valuable appliances due to its high thermal stability. But for such applications boosting of physicochemical properties is still needed. In future this can be achieved by incorporating several different compounds.

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