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**Improvement of the microbiological quality of ready-to-eat peeled shrimps  
(*Penaeus vannamei*) by the use of chitosan coatings**

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## **1. Introduction**

Shrimps are an excellent source of protein, non-protein nitrogen compounds (amino-acids), omega-3-fatty acids among other nutrients. However, this rich biological composition makes shrimps highly susceptible to microbiological spoilage, limiting their shelf-life (Gram and Dalgaard, 2002). During storage, the quality of seafood degrades due to a complex process, where biochemical, microbiological or physical changes occur. Microbial activity is responsible for spoilage of most fresh and lightly preserved seafood. This process is dominated by slime production, loss of texture and colour and odour changes due to production of volatile metabolites from non-protein nitrogenous compounds (Ray, 2004).

There has been an increasing interest in extending the shelf-life of shrimps due to a growing demand for fresh, less preserved and ready-to-eat (RTE) foods. Seafood is commercialised mainly under refrigeration or freezing conditions, but these technologies are not effective enough in retarding the microbial deterioration of seafood. Therefore, prevention of spoilage is an important challenge for the food industry.

Nowadays, there is a growing interest in the use of edible films and coatings with antimicrobial properties, which help improve the shelf-life of food products. Chitosan is a

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