

storage ($2\pm 1^\circ\text{C}$) conditions. Biochemical parameters like pH, thiobarbituric acid value, peroxide value, free fatty acid, total volatile base nitrogen and aerobic plate count were determined. Study indicated that the microbial and biochemical quality of fish packed in different PLA/NC film were superior to LDPE and virgin PLA films.

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Influence of packaging atmosphere on the quality of karikkadi shrimp stored at chilled condition

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The objective of the current study was to assess the effect of different packaging atmosphere (air, vacuum, and oxygen absorber) on the keeping quality of whole *Parapenaopsis stylifera*, commonly known as 'karikkadi shrimp', during chilled storage (2°C). Fresh karikkadi shrimp after washing in potable water was divided into 3 sets and nylon-ethylene vinyl alcohol (EVOH)-polyethylene multilayered film was used to pack all the 3 sets of shrimps. Fresh shrimp had moisture and protein contents of 77% and 20%, respectively. Within a day, the O_2 absorber, ZPT 200 EC reduced the percentage of oxygen inside the package to less than 0.01%. During storage, there was a significant difference ($p < 0.05$) in the count of mesophilic and psychrotrophic bacteria of all the three samples and shrimp packed with O_2 absorber (OA) had lower values compared to vacuum (VP) and air packed (AP) samples. The count of *Pseudomonas* spp. was higher in AP than the reduced O_2 packed samples (VP and OA), throughout

the storage. TBARS values presented an increasing trend during the storage of shrimp and the rate of increase of TBARS value was more in AP sample. Based on the sensory score, the shrimps packed with OA and VP were acceptable up to 15 and 12 days, respectively whereas the shelf life was only 9 days for AP sample. Results of the current study indicate that reduced O_2 packaging atmosphere positively influences the quality and shelf life of chilled stored shrimp by restricting the presence of O_2 inside the package.

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Encapsulation of dietary fish oil and its incorporation in bread

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Lipids from fish are important because of their health benefits associated with high levels of long chain omega-3 polyunsaturated fatty acids (PUFA) like Eicosa pentaenoic acid (EPA) and docosahexaenoic acid (DHA). These plays an possible role in foetal and early childhood development and improved cognition and provides protection against various cancers in human cell lines and have a potential to improve cardiovascular and mental health. Decreased rates of cardiovascular diseases have been noted in populations with high fish consumption. The consumption of omega-3 poly unsaturated fatty acids in diet is low and alternative ways for the incorporation fish oil are being explored. Supercritical fluid extraction (SFE) has become an attractive technology for obtaining high quality fish oil and also some by-products from fish. Technologies such as microencapsulation extends the shelf-life of fish oils, offering