Prevalence of Listeria monocytogenes in ready-to-eat fish and its control by fresh lemon juice

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Abstract:

In this work, the prevalence of L. monocytogenes in ready-to-eat (RTE) fish from different restaurants in Assiut city was investigated by cultural and PCR methods. Also, the antimicrobial activity of fresh lemon juice against L. monocytogenes in fish meat was evaluated. Results showed that L. monocytogenes could be isolated from 6 RTE fish samples with incidence of 6%. By PCR, 5 were confirmed to be L. monocytogenes out of 6 isolates by cultural method. Treatments of lemon juice for different exposure times caused reduction ranging between 1.4 and 4.7 log CFU/g for L. monocytogenes. Conclusion: The results of this study showed that consumption of RTE fish especially grilled fish may constitute a public health hazard, as it may be associated with food poisoning microorganisms such as L. monocytogenes. Inactivation effect of lemon juice on L. monocytogenes may give a practical and easy way of providing food safety for RTE fish.

Keywords:

microbiological safety, RTE fish, L. monocytogenes, PCR, fresh lemon juice

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