

عنوان مقاله:

Identification of *Vibrio parahaemolyticus* Isolated from Seafood via Matrix-Assisted Laser Desorption/Ionization Time of Flight Mass Spectrometry

محل انتشار:

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خلاصه مقاله:

Background: *Vibrio parahaemolyticus* is the most common cause of human infections of all members of the *Vibrio* genus, accounting for between ۳۱ and ۵۰% of the food poisoning cases. Consumption of food contaminated with *V. parahaemolyticus* can cause severe digestive infection with symptoms of watery or bloody diarrhoea, stomach pain, vomiting, fever, and dehydration. The objective of the study was to establish the reliability of Matrix-Assisted Laser Desorption/Ionization Time of Flight Mass Spectrometry (MALDI-TOF MS) for identifying *V. parahaemolyticus* isolated from seafood marketed for human consumption. Methods: A hundred and eighty seafood samples including mussels (*Mytilus galloprovincialis*), veined rapa whelks (*Rapana venosa*), bluefish (*Pomatomus saltatrix*), horse mackerel (*Trachurus mediterraneus*), gilthead seabream (*Sparus aurata*), sea bass (*Dicentrarchus labrax*), Atlantic salmon (*Salmo salar*), whiteleg shrimp (*Litopenaeus vannamei*), Argentine shortfin squid (*Illex argentinus*), and oysters (*Ostreidae*) were tested by Polymerase Chain Reaction (PCR) and MALDI-TOF MS for the presence of *V. parahaemolyticus*. Results: Of the tested ۱۰۳ isolates, ۴۴ (۴۳%) samples were identified as *V. parahaemolyticus* by PCR, while ۴۱ (۴۰%) samples were confirmed as *V. parahaemolyticus* by MALDI-TOF MS. The PCR analysis using non-parametric t-test for comparison of the proportions confirmed ۹۳% of the results obtained by MALDI-TOF MS. Conclusion: MALDI-TOF MS showed high discriminative capacity and can be used for high reliability fast identification of *V. parahaemolyticus* in seafood samples. DOI: ۱۰.۱۸۵۰۲/jfqhc.۱۰.۳.۱۳۶۴۴

کلمات کلیدی:

Vibrio Parahaemolyticus, Seafood, Food Safety, Polymerase Chain Reaction

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