عنوان مقاله:

Prevalence, Molecular Identification, Antimicrobial Resistance, and Disinfectant Susceptibility of Listeria innocua Isolated from Ready-to-Eat Foods Sold in Johannesburg, South Africa

محل انتشار:

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خلاصه مقاله:

Background: Food contamination with Listeria spp. can occur at all stages of the food chain. The aim of this research was to investigate the prevalence, molecular identification, antimicrobial resistance, and disinfectant susceptibility of Listeria innocua isolated from Ready-To-Eat (RTE) foods sold in Johannesburg, South Africa. Methods: Eighty RTE foods were collected from Johannesburg, South Africa. The ۱۶S rRNA region of L. innocua isolates was amplified, sequenced, and identified using Basic Alignment Search Tool (BLAST). The antimicrobial resistance and disinfectant susceptibility (against four commercial disinfectants) of the isolates were evaluated using disk diffusion and microdilution assays. Data were statistically analyzed using SPSS v. ۲۳.۰. Results: Listeria strains revealed a high ۱۶S rRNA gene sequence analogy to L. innocua of between ۹۸-۹۹%. The overall prevalence of L. innocua was ۲۱.۳% (۱۷ out of ۸۰) in the RTE food samples. Most isolates were susceptible to the studied commercial disinfectants. All the L. innocua isolates from food sources were found to be resistant to ampicillin and cephalothin, while ۸۳ and ۷۴% of isolates were resistant to colistin sulphate and sulphatriad. Conclusion: Prevalence of L. innocua was considerable in the RTE food samples sold in Johannesburg, South Africa. The L. innocua isolates showed high antibiotic resistance against ampicillin, cephalothin, colistin sulphate, and sulphatriad. DOI: ۱۰.۱۸۵۰۲/jfqhc.۸.۳.۷۲۰۰

کلمات کلیدی:

Listeria innocua, Drug Resistance, Microbial, Disinfectants, Polymerase Chain Reaction, Fast Foods, South Africa