

Antibiotic Resistance Profiling of *Salmonella* sp. isolated from African Catfish (*Clarias gariepinus*)

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Abstract

The African catfish (Clarias gariepinus) is an important fresh water fish consumed by a large percentage of the populace globally and it may be contaminated by pathogenic bacteria such as Salmonella sp. In this study, a total of fifteen (15) samples of African catfish were collected from different markets in Lokoja, Nigeria. The Salmonella sp. were isolated from the catfish samples by pre-enrichment in peptone water and subsequent inoculation on selective medium namely brilliant-green agar (BGA), bismuth sulphite agar (BSA) and Salmonella-Shigella agar (SSA). The Salmonella isolates were tested for susceptibility to 10 different commercially available antibiotics using the disc diffusion method. A total of thirty-four Salmonella species was isolated. The percentage occurrence of Salmonella sp. in the catfishes examined was very high (80%). The incidence of Salmonella sp. in the intestine (86.7%) of the catfish was higher than for the gills (66.7%) and the skin (73.3%). Majority of the isolates were resistant to Amoxicillin, Sulfomethoxazole-trimethoprim, Amoxicillin-clavulanic acid and Streptomycin. This study therefore demonstrated the occurrence of Salmonella species in African catfish with some exhibiting antibiotic resistance. Thus, there is a potential risk of transmission of drug resistant Salmonella species to man when contaminated catfish is consumed. The use of antibiotics in fish farming should be regulated so as to decrease antibiotic residues in fish.

Keywords: *Salmonella*, Antibiotic Resistance, African Catfish

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