

# **Risk Assessment of *Edwardsiella tarda* in Fish with special concern to use PCR for isolation and identification from Fish**

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*Edwardsiella tarda* is the causative agent of edwardsiellosis that can devastate both freshwater and marine fish culture. *Edwardsiella tarda* is Gram-negative bacteria and classified as risk group 2. In this study, detection of *Edwardsiella tarda* was isolated from fish by traditional methods then confirm by PCR with application of biosafety measures to prevent lab acquired infection. *Edwardsiella tarda* is of zoonotic importance as it could be transmitted to human.

## **Materials and Methods:**

Materials: Fish, different culture media.

Methods: Isolation and identification was carried out in biosafety level 2 lab to avoid contamination and minimize risk. The necessary PPE were used including lab coat, gloves and goggles.

During work, an accidental spill occurred. The spill was gently covered with paper towels and left for 15 minutes. Then used the effective disinfectant (1600 ppm hydrogen peroxide)

Infected Fish samples were put in autoclavable bag, poured the disinfectant then passed to the incinerator. All equipments used or that in contact with the infectious organism were disinfected by autoclave.

The obtained isolated strains were stored in leak-proof containers that are appropriately labeled.

## **Results: -**

- No record of lab acquired infection or any hazards were revealed during work.

## **Recommendation:**

- Obtaining material safety data sheet is necessary before isolation and identification of any pathogenic microorganisms.

- All lab workers and coworkers should be well trained on all biosafety requirements.

- Using the necessary PPE is a must