

## Evaluation of endurance against antibiotics in the western blotting shrimp propagation centers on pathogens of vibrio

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### Abstract

This study was conducted to evaluate the resistance to antibiotics in the western white shrimp propagation centers on pathogens of *Vibrio* bacteria. In Iran, the most important bacteria in the shrimp are the *vibrio* species. In Bushehr Province, due to the high efficacy of erythromycin antibiotics, streptomycin oxytetracycline and trimethoprim in bacterial diseases, were selected as the species (2011). The bacterial strains of *Vibrio harvey* and *Vibrio alginolyticus* were isolated from the replication centers and the resistance of the bacteria was investigated using disk diffusion method. Isolation of bacteria and identification by biochemical and biological tests and comparison of pH and different temperatures were investigated. All three *Vibrio harvey* bacteria isolated from the three replication centers A, B, C, relative to the antibiotic erythromycin, were semi-sensitive, resistant and susceptible, respectively. Three antibiotics were susceptible to trimethoprim for antibiotics. *Vibrio alginolyticus* isolated from three proliferation centers was resistant to streptomycin. But the isolated bacteria from center C were resistant to semi-sensitive erythromycin and the two bacteria A and B. The results showed that the highest antibiotic resistance to streptomycin at the first stage and then erythromycin is seen at the next stage. The results showed that the pH of the antibiotics was low at pH 6 and increased to 7 by increasing pH. Antibiotic resistance with temperature is also significant ( $P < 0.05$ ). The analysis showed that temperatures of 35 °C are the most appropriate temperature for *Vibrio* bacteria. Assessment in aquaculture also has many challenges. In particular, this assessment of antibiotics is one of the key elements in the health of the community.

**Keywords:** Antibiotic resistance, *Litopenaeus vannamei*, *Vibrio harvey*, *Vibrio alginolyticus*.