

Isolation and Identification of symbiotic *Vibrio alginolyticus* from Persian Gulf sponges with API 20NE kit

Yashgin Hassanzadeh^{1*}

Nima Bahador²

Majid Baseri Salehi³

1. M.Sc. Student of Microbiology, Department of Microbiology, Faculty of Science, Fars Science and Research University, Islamic Azad University, Fars, Iran

2. Assistant professor and Faculty member, Department of Microbiology, Faculty of science, Fars Science and Research University, Islamic Azad University, Fars, Iran

3. Assistant professor and Faculty member, Department of Microbiology, Faculty of science, Kazeron University, Islamic Azad University, Kazeron, Iran

*Corresponding author:

y.hassanzadeh66@yahoo.com

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Abstract

Vibrio alginolyticus is a pathogenic and halophilic Gram negative bacterium belongs to family Vibrionaceae. The bacterium naturally found in temperate marine and estuarine environments, which cause different type of human infections like wound infection and otitis. Hence, the present study was conducted to isolate symbiotic *Vibrio alginolyticus* from Persian Gulf sponges and then characterize the isolates using API 20NE diagnostic kit. For this purpose, 4 different sponge species (*Algela* sp. and *Spongia* sp.) were collected from 1 to 5 meters depth of Bandar Abbas Shahid Haghani warf's surrounding waters (August 2013) by scuba diving. The sponges with sea water have been transferred to the microbiological lab and after washing under distilled water, extracted using sea water. Then the extracts were serially diluted and subsequently cultured on Marine Agar2216 and TCBS media. The plates were kept at 25°C for 48 hrs and the isolates were preliminary characterized using: Gram staining, Oxidase, Catalase and Citrate tests. Finally, the isolates were biochemically identified through API 20NE kit (Biomérieux, France). The results obtained from this study indicated that totally 22 bacterial isolates were gram negative. Out of all, 4 isolates were identified as *Vibrio alginolyticus*. Because the bacterium is pathogenic for human therefore, the results proposed that the people who live in this geographical area should be aware for the health risks of this bacterium and in case of any wound or abrasion don't swim in this part.

Keywords: *Vibrio alginolyticus*, sponge, Persian Gulf, API kit.