

Assessment of *Chattonella subsalsa* Cyst and Excysted Cells Isolated from Sediment of Lipar Zone (Makran Coast) Based on Morphology and LSU-rDNA Gen Sequence

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Abstract

This study has been carried out in order to identify the phytoplankton cysts from sediment of Lipar zone (southeast coast of Iran) based on morphology and phylogeny of germinated cell. The sediment samples were collected from three stations by Ekman grab with 225 cm² collecting area in 2015. Unknown cysts with different morphology were cultured in the petridishes containing the F2 medium and kept in phycolab and Germinator under a proper condition 12:12 L/D in 25 °C±1. The germinated cell was similar to the *Chattonella subsalsa* based on initial morphological assessment. To confirm the identification, DNA of germinated cell was extracted and PCR and gene sequence of partial LSU-rDNA region were done. Phylogenetic analysis showed that germinated cell with 98% boot strap support was resembled to the *C. subsalsa*. The assessment of cyst/theca relationship in the phytoplankton lifecycle can be a useful tool in the identification of the phytoplankton cells.

Keywords: *Raphidophytes*, *Bloom*, *Phylogeny*, *Cyst*, *Phytoplankton*, *Makran*.
