

Half maximal effective concentration (EC₅₀ of the Linear Alkylbenzene Sulfonate (LAS) on the green marine microalgae *Nannochloropsis oculata*

Mohsen Mokhtarian¹

Rasool Zamani-ahmadmahmoodi^{2*}

Mehrdad Fattolahi³

1, 2, 3. Department of Fisheries
and Environment, Shahrekord
University, Shahrekord, Iran

***Corresponding author:**

zamani@nres.sku.ac.ir

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Abstract

In the present study, half maximal effective concentration (EC₅₀) of the Linear Alkylbenzene Sulfonate on microalgae *Nannochloropsis oculata* were investigated. The experiment was carried out with seven treatments (six main treatments and one control) with three replications in 25 °C and pH of 6.9 for 72 hours on July 2017. The concentration of linear alkyl benzene sulfonate in first to six treatments were 2, 2.5, 3, 4, 5, and 7 mg/l, respectively. After the experiment and counting the microalgae, inhibitory concentration percent was calculated in each treatment. Also, half maximal effective concentration (EC₅₀) was calculated using with probit regression test. EC₅₀ was obtained 3.05 mg/l. The level of detergents in marine ecosystems is rising; therefore, in order to reduce their irreparable damage to aquatic organisms, especially microalgae organisms, detergents with high degradability should be used instead of detergents that create very persistent foam.

Keywords: Microalgae *Nannochloropsis oculata*, Surfactants, Linear alkyl benzene sulfonates, Inhibitory concentrations.