

Mathematical modeling of the salt inhibition effect on the growth of *Nannochloropsis gaditana*

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Mineral carbonate in liquid solution has been suggested an alternative carbon source to solve the carbon shortage and leakage problem in mass cultivation of microalgae in a raceway pond. The high salinity condition, which is adverse to microalgae cultivation, is the largest obstacle for adopting the liquid carbon source. High salt concentration inhibits the growth of microalgae by reducing the photosynthetic efficiency due to the decreased electron transfer in the photosystem. In this research, a mathematical modeling of the salt inhibition has been conducted with non-competitive inhibition equation to predict the salt inhibition effect on the growth of *Nannochloropsis gaditana*. Accuracy of the model is assessed using experimental data.