

Influence of Suspended Solids in West Sea of Korea on Biomass Productivity of *Tetraselmis* sp. KCTC12429BP

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Supplying huge amount of nutrients essential to microalgal growth is major obstacle for economic feasibility of microalgal biofuels. Seawater contains all of these nutrients, so using seawater for microalgal cultivation can decrease the production cost of microalgal biofuels. Beside nutrients, total suspended solids (TSSs) are also contained in seawater and might affect biomass productivity. The effect of TSSs on the biomass productivity of a green microalgae, *Tetraselmis* sp. KCTC12429BP was investigated. TSSs were collected from coastal water of Yeongheung Island, Incheon. Sterilized and non-sterilized TSSs were added to artificial seawater with f/2-Si medium. The overall algal biomass productivity of control group was 0.64 g/L/day while those of sterilized TSSs and non-sterilized TSSs were 0.57 g/L/day and 0.52 g/L/day. When microalgal cultivation by using natural seawater, simple and effective methods to control the influx of TSSs will be needed to prevent decreases in biomass productivity.