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**Enhanced growth and hydrocarbon production of *Botryococcus braunii* KMITL 2
by optimum carbon dioxide concentration and concentration-dependent effects on
its biochemical composition and biodiesel properties**

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ABSTRACT

The purposes of this study were to find the optimum level of supplementing CO₂ for increasing the biomass and hydrocarbon production of *B. braunii* KMITL 2 (A race) and to determine the effects of CO₂ level on CO₂ fixation and biodiesel properties. The experimental results showed that the alga supplemented with 10% CO₂ produced the highest biomass (1.48 ± 0.02 g L⁻¹) and CO₂ fixation rate (100.43 ± 1.42 mg L⁻¹ d⁻¹) that were 2.7 and 5.3 times higher than the control (0.04% CO₂). The gravimetric

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