

Effects of nitrogen sources on cell growth and lipid accumulation of green alga
Botryococcus braunii LB572

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Botryococcus braunii is a green microalga that produces hydrocarbons whose content can reach 75% of the dry biomass, has already been proposed as a future renewable source of fuel. In this study, the effects of nitrogen sources (nitrate, ammonium, and urea) on the growth and lipid accumulation of *B. braunii* LB572 were investigated using bubble column photobioreactors. Differences in biomass and lipid production were found among the cultures with the various nitrogen compounds. The maximum biomass concentrations in the five cultures with sodium nitrate, calcium nitrate, potassium nitrate, ammonium phosphate, and urea were 4.5, 3.97, 3.67, 2.83, 1.83 g/L dry cells, respectively. The highest lipid content of 65.63% dry cells weight (DCW) was obtained at the ammonium phosphate, however, a remarkable lipid productivity of 0.16 g/L/day was achieved at sodium nitrate with a lipid content of 55.66% DCW and a biomass productivity of 0.284 g/L/day.