

## Hydrothermal treatment of a microalga *Golenkinia* sp. and physicochemical analyses of the biocrudes

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Hydrothermal treatment (HTT) is a promising conversion method of microalgal biomass into 'biocrude', a mixture of diverse hydrocarbons, and it can be catalytically upgraded into liquid fuels. Biocrude can be produced with even microalgae with low lipid contents because the whole cell including carbohydrates and proteins can be transformed into oily substances. In this study, we produced biocrude using a low-lipid microalga *Golenkinia* sp. at different HTT conditions such as temperatures and concentrations of feed slurry. We performed various physicochemical analyses of the resultant biocrudes to evaluate feasibility of HTT of microalgae. For this purpose, asphaltene content, elemental composition, effective hydrogen-carbon ratio, and thermal stability of the biocrudes were analyzed. (This work was supported by the Advanced Biomass R&D Center (ABC) of Global Frontier Project funded by the Ministry of Science, ICT and Future Planning (ABC-2010-0029728))