

Levulinic acid ester production by in situ transesterification of wet microalgal biomass

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In situ transesterification of microalgal biomass is one of the promising biodiesel producing process as it integrates lipid extraction and conversion steps. However, it is still difficult to meet reasonable economic requirement because of its excessive solvent use. Therefore, it is essential to produce extra value-added product from the algal biomass. By in situ transesterification, levulinate (levulinic acid ester), which can be used as a fuel additive or fragrance, can be produced. In this study, we found some factors changing the productivity of levulinate such as temperature, acid concentration, and type of alcohol.