

Opportunities of biodiesel industry waste conversion into value-added products

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ABSTRACT

The global attention for the alternative fuel to decrease the dependence on carbon-biased fossil fuels and reduce the carbon footprint led to biodiesel production. Crude glycerol generated as a major by-product of the biodiesel industry. The vast amounts of crude glycerol pose an environmental threat. Valorisation of industrial waste is the big challenge to provide a significant economic advantage by the sustainable approach. Hence the crude glycerol needs to be valorised through the biotechnology process into value-added products and gives biodiesel producers more revenue. The biodiesel industrial by-product glycerol waste serves as raw material to convert into several products like citric acid, succinic acid, 1,3-propanediol, butanol, and ethanol. The present manuscript focuses on the significance of crude glycerol from the biodiesel industry as a stable feedstock that undergoes biotransformation to value-added products by microorganisms.

KEYWORDS: Crude glycerol, Biodiesel, Bioethanol, Bioconversion, Valuable products

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