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A REVIEW ON BIODIESEL SEPARATION AND PURIFICATION

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ABSTRACT

Biodiesel as a biodegradable, sustainable, and clean energy has sparked fresh and increasing interest across the globe in recent years, owing to advances in biodiesel fuel and environmental constraints such as climate change. Separation and purification of biodiesel is a key technique in the manufacture of biodiesel from biomass. Traditional biodiesel separation technologies like gravitational settling, decantation, and filtration, as well as biodiesel purification techniques like water washing, acid washing, and washing with ether and absorbents, have proven to be inefficient, time and energy consuming, and less cost effective. The use of a membrane reactor and a separative membrane in the separation and purification of biodiesel shows tremendous potential. To address the problems often encountered in the separation and purification of biodiesel, membrane technology must be researched and utilized. Both traditional and cutting-edge membrane methods for biodiesel refining have been critically examined in this study. Catalysts, free fatty acids, water content, and oil to methanol ratios all have an impact on the purity and quality of biodiesel.

KEYWORDS: *Biodiesel, Membrane Technology, Purification, Separation, Transesterification.*

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