



## **A Novel Method for Refining Crude Glycerol a Byproduct from Biodiesel Industries**

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### **ABSTRACT**

*Crude glycerol is a by-product obtained during the production of biodiesel by a process called transesterification. Around 20% of crude glycerol is obtained as byproduct. Refining of crude glycerol is essential for its application to various value products in pharmaceutical, food, cosmetics and lubrication in industries. Present paper reveals refining of crude glycerol effectively by acidification with acid like H<sub>2</sub>SO<sub>4</sub>, then it was subjected to neutralization followed by decolorize with activated charcoal. During this refinement process residual organic matter, water, salt, methanol and odors are removed. The method which developed for refining of crude glycerol is cost effective for industries. The refined glycerol was extensively characterized by infrared spectrum (IR spectra) and high-performance liquid chromatography (HPLC).*

### **Highlights:**

1. Simple method had developed for refining crude glycerol
2. Method is very useful for biodiesel industries to refine by product
3. Crude glycerol is refined up to pharmaceutical grade.
4. Simple and Low cost for refining process.
5. Refining processes make value addition for byproduct to sustain industrial growth.

**Keywords:** Crude glycerol, Transesterification, Decolorize, IR and HPLC.

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