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Calcium oxide synthesis from cockle shells. The catalyst For the production of biodiesel from palm oil.

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This research study Calcium oxide synthesis from cockle shells for catalyst in biodiesel production from palm oil. The shells are calcium is transformed into calcium oxide. This is a powerful catalyst for the transesterification reaction. The research was burned cockle shells at 900 °C for 5 hours. The ratio of methanol : oil is 9 : 1 molar. The temperature reaction at 80 °C for 30 minutes. The amount of calcium oxide powder 1-5% mass of oil. Found that calcium powder 3% shown the best quality biodiesel in highest standards level and % productivity. Due to the density in the standard criteria ASTM D 1298, 860 kg/m³ - 900 kg/m³, the viscosity is criterion standard ASTM D 445, 3.5 cSt - 5 cSt,. The color is compliant biodiesel is transparent. and pH is be neutral.

Keywords: Biodiesel Transesterification Cockle shell calcium oxide

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