

Eco-production of biodiesel and glycerol carbonate by lipase

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Due to depleted fossil fuel resources and rising environmental concerns, renewable energy is an attractive alternative for fossil fuels. Biodiesel is produced from renewable resources and emits less environmental pollutants than fossil fuels. Glycerol carbonate is one of the glycerol derivative, can be used in an monomers for polymeriation, medical solvent and chemical intermediate. In this work, we studied an process to coproduce of biodiesel and glycerol carbonate in solvent-free system. And we optimized the conversion of biodiesel and glycerol carbonate through the investigation of the effects on of various parameters. (enzyme types, enzyme concentration, molar ratio, temperature etc.)