Title (en)

MICROREACTOR PROCESS FOR MAKING BIODIESEL

Title (de)

MIKROREAKTORVERFAHREN ZUR HERSTELLUNG VON BIODIESEL

Title (fr)

PROCÉDÉ DE MICRORÉACTEUR POUR FABRIQUER DU BIODIÉSEL

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Application

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Abstract (en)

[origin: WO2007142983A2] Embodiments of a method for using a microreactor to produce biodiesel. For example, the method may comprise flowing a first fluid comprising an alcohol and a second fluid comprising an oil to the microreactor. Alcohols typically, but not necessarily, are lower aliphatic alcohols, including methanol, ethanol, propanol, butanol, amyl alcohol or combinations thereof. Biodiesel production can be under supercritical conditions, where such conditions typically are determined relative to the alcohol component. Suitable sources of oil products include soy, inedible tallow and grease, corn, edible tallow and lard, cotton, rapeseed, sunflower, canola, peanut, safflower, and combinations thereof. Catalysts can be used to facilitate biodiesel production, such as metal oxides, metal hydroxides, metal carbonates, alcoholic metal carbonates, alkoxides, mineral acids and enzymes. Oil conversion to biodiesel typically increases with increasing mean microreactor residence time. Certain embodiments of the present invention include blending biodiesel produced by the method with petroleum-based products.

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