

## Preparation of Nickel Catalysts Deposited on Gamma Alumina to Process Hydrodeoxygenation First Generation Biodiesel

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### ABSTRACT

Due to the current problems in the consumption of fossil fuels nowadays; by the wet impregnation method incipient, a nickel catalyst supported on gamma alumina was prepared using as precursor salt Nickel acetate tetrahydrate, because the precursor salt is not soluble in water, a variant of the method, consisting of a grinding and physical blending of boehmite precursor to nickel salt, once the homogeneous physical mixture drops of a solution of nitric acid dissolved 1:16 in water was added, was applied in this possible to modify the pH of the boehmite surface and achieve the impregnation of the salt. They were anchored nickel particles by a controlled, to obtain nickel oxide, calcination method finally the metal oxide catalysts were reduced by exposure to a flow of hydrogen at 400 ° C, obtaining as a product catalyst Ni/ $\gamma$ -Al<sub>2</sub>O<sub>3</sub> can accelerate and direct the hydrodeoxygenation reaction of oxygenated organic compounds for converting a first generation biodiesel second generation biodiesel.

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**Keywords:** Ni/  $\gamma$ -Al<sub>2</sub>O<sub>3</sub>; second generation biodiesel, oxygenated organic compounds.

