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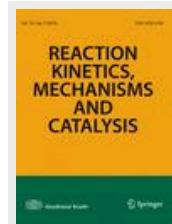
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Influence of the clay and the nickel content in catalysts for vegetable oil hydrogenation

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2. Jovanovic, Dusan (2002) Partial hydrogenation of edible oils: Synthesis and verification of the nickel catalyst. *Hemijaska*

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摘要

Nickel catalysts prepared using two different clays as support, natural bentonite and palygorskite, and with different nickel contents have been tested in the hydrogenation of a sunflower oil. The influence of the clays, and of the nickel-bentonite ratio on the activity, selectivity and trans-isomer formation was investigated. Previously it was established that no diffusional limitations were controlling the rate. Bentonite with the highest nickel content was the most active and selective catalysts.

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INFLUENCE OF THE CLAY AND THE NICKEL CONTENT IN
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INTRODUCTION

Many studies have been carried out on oil hydrogenation with commercial nickel catalysts [2, 3, 11], all of them with high nickel contents (25% to 60%), using conventional supports such as silica, alumina or carbon. Actually new nickel supports are being tested aiming to improve activity and selectivity and to decrease transisomerization products.

Clays have been described as good supports because of their high specific surface area and good adsorption capacities, and for their abundance and low cost. Palygorskite described by Serratosa [16] and bentonite are abundant in Spain 1975 [4, 12].

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