

PEMANFAATAN KATALIS NI/ZEOLIT PADA HIDROGENASI KATALITIK ETIL PALMITAT MENJADI SETIL ALKOHOL

Title	PEMANFAATAN KATALIS NI/ZEOLIT PADA HIDROGENASI KATALITIK ETIL PALMITAT MENJADI SETIL ALKOHOL
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Abstract	The catalytic hydrogenation of methyl palmitate to cetyl alcohol using Ni supported on activated natural zeolite catalysts (Ni/Zeolite) has been carried out. In this work, the effect of catalyst amounts and H ₂ flow rate on methyl palmitate conversion and yield of cetyl alcohol were studied. Catalytic hydrogenation was performed in stainless steel fixed bed reactor. The methyl palmitate (10 g) was loaded into the reactor vessel at 400 °C for 30 minutes. In order to study the effects of catalyst amount at constant H ₂ flow rate, the catalyst were varied i.e. 5, 10, and 15 g. To investigate the effects of H ₂ flow rate were varied from 20, 40, and 60 mL.min ⁻¹ at constant catalyst amount. The composition of the products was analyzed by GC and GC-MS. The results showed that methyl palmitate conversion increase with the increasing of catalyst amount. The highest methyl palmitate conversion (45.62 %) and yield of cetyl alcohol (36.44 %) were obtained for 15 g catalyst and 40 mL. min ⁻¹ H ₂ flow rate.
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