

Jatropha curcas seed oil as new substrate for enzymatic methylhydroxylaminolysis.

ABSTRACT

Synthesis of methyl fatty hydroxamic acids (MFHAs) was carried out using lipozyme RM IM based on Jatropha Curcas seed oil. Optimized conditions were obtained at a mole ratio of 6/1 of methyl hydroxylamine/oil, temperature at 41°C, enzyme 30mg/mmol and 72 h of reaction time. At this optimal condition, the yield% of methyl fatty hydroxamic based on Jatropha Curcas seed oil was 93.92%. The product was characterized by Fourier transform infrared (FTIR), and proton and carbon nuclear magnetic resonance (¹H-NMR and ¹³C NMR) spectra.

Keyword: Enzymatic reaction; Jatropha curcas seed oil; Lipase; Methyl fatty hydroxamic acid.