

Preparation of fatty hydroxamic acid from canola oil.

ABSTRACT

Fatty hydroxamic acids were synthesized from canola oil by hydroxylaminolysis using lipozyme as catalyst. The products were converted to copper fatty hydroxamate and precipitated in acetone. The precipitate was treated with nitric acid solution to release fatty hydroxamic acids and extracted to chloroform. The fatty hydroxamic acids were obtained by solvent evaporation under reduced pressure. Qualitative identification of hydroxamic acids were carried out by observing colour of the complexes with vanadium(V), iron(III) and copper(II) which were purple, dark red and green, respectively. The FTIR spectrum of the product showed the existence of the characteristic amide peaks at 3270 and 1642 cm^{-1} . Among four oil samples studied, canola oil of Ladan brand gave the highest yield of fatty hydroxamic acids.

Keyword: Fatty hydroxamic acid; Copper fatty hydroxamate; Lipozyme; Canola oil.