

The Enzymatic Acylation of α -Hydroxy Ketones with Lipase Novozyme 435

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Lipases have proved to be efficient catalysts for the preparation of chiral compounds. Novozyme 435, which is an immobilized form of lipase B from *Candida antarctica*, has been found to be a particularly useful biocatalyst for the stereo-recognition of the secondary alcohols.¹⁾ Alkyl lactates have already been successfully resolved by using Novozyme 435.²⁾

The stereoselective hydrolysis of α -acetoxy ketones with the whole cell of *Rhizopus Orizae* and their variants, were accomplished with good stereoselectivities and high yields.³⁾ By using Novozyme 435 under mild conditions, the excellent enantioselective acylation of (*R*)-optical isomer from racemic α -hydroxy ketones with vinyl alkanoates has been achieved. In order to investigate the effect on the stereoselectivity and the reaction rates, the acylations have been carried out under various reaction conditions such as temperature, substrate concentration and so on. It is expected that the present method will prove to be efficient in achieving the chiral α -hydroxy ketones.

References

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