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综述

磷脂对脂肪酶催化性能的影响

李扬, 杜伟a, 刘德华b

清华大学化学工程系应用化学研究所, 北京 100084

LI Yang, DU Weia, LIU Dehuab

Institute of Applied Chemistry, Department of Chemical Engineering, Tsinghua University, Beijing 100084, China

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摘要 脂肪酶催化可再生动植物油脂的酰基化反应可以生产多种具有重要价值的化工产品, 近年来受到了越来越多的关注. 而天然油脂原料中往往含有一定量的磷脂, 它对脂肪酶的催化活性、热稳定性以及反应动力学等的影响非常显著. 介绍了油脂中存在磷脂的种类与结构, 并分别针对脂肪酶催化的水解、酯化和转酯化反应过程, 综述了磷脂对脂肪酶催化性能的影响, 以及可能的作用机制.

关键词: 油脂 磷脂 脂肪酶 催化活性 生物柴油

Abstract: Lipase-catalyzed acylating reaction of renewable oils for the production of various valuable chemicals has drawn considerable attention in recent years. However, natural raw oil usually contains some phospholipids. Many studies have revealed the remarkable effect of the phospholipids on lipase's catalytic activity, thermal stability and reaction kinetics. The major phospholipid molecules contained in oils were introduced. The effect of phospholipids on enzyme's catalytic performance as well as the related influence mechanism was reviewed during the reactions of lipase-mediated hydrolysis, esterification, and transesterification.

Keywords: oil, phospholipid, lipase, catalytic activity, biodiesel

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