

COVALENT IMMOBILIZATION OF LIPASE FROM *Bacillus* sp. ONTO POLY(VINYL ALCOHOL)-GLUTARALDEHYDE-POLY(ANILINE)-GLUTARALDEHYDE DISCS

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Lipases (3.1.1.3) are widely used in hydrolysis of fat and oils, in the synthesis of acyl esters and of organic intermediates. Despite their innumerable advantages, an inconvenient exist in utilize these enzymes at the native form, because they can remain in the product and could represent a contaminant for industrial production. In this work, a lipase from *Bacillus* sp. was immobilized onto poly(vinyl alcohol)-glutaraldehyde-poly(aniline) discs via glutaraldehyde arm (PVAG-PANIG). We studied immobilization (time and pH), some kinetics parameters (time and optimal pH for reaction) and operational stability. After observed all the results we could conclude that 60 min were satisfactory for complete the immobilization process under pH 5.0. For kinetic parameters, 20 min and in pH 8.0 the catalysis process was completed. Additionally, PVAG-PANIG-lipase could be used repeatedly and continuously during four times with no lost of activity. These results showed a promising material for lipase industrial applications and permitted immediate enzyme removal from the bulk of reaction.

Key words: immobilization, lipase, PVAGPANIG.