



**TAL 797 – Seminário**

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**Imobilização de lipases em suportes poliméricos**

**Immobilization of lipases on polymer supports**

Lipases are enzymes widely used in industry because of the wide variety of reactions they can catalyze, such as total or partial hydrolysis of triacylglycerols, as well as esterification, transesterification and interesterification of lipids. The immobilization of lipases reduces the costs of their production through the preservation of their catalytic activity and the possibility of reuse of the biocatalyst. Several natural polymers (agarose, chitosan, alginate, dextran, gelatin, pectin, among others) and synthetic polymers (polyurethane, polystyrene, polyacrylamide, alumina, silica, among others) are commonly used as support matrices for the immobilization of lipases. Synthetic polymeric supports exhibit varieties of physical forms and chemical structures, that can be combined to form an ideal support. The naturals present some advantages when compared to the synthetics, like the low cost, wide obtaining of renewable sources and facility of degradation, without causing damage to the environment. The choice of the type of support, as well the immobilization method, will depend on the characteristics of the lipase and its conditions of use. Thus, due to the variability of these factors, the optimal conditions of immobilization can only be determined empirically.

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