Covalent immobilization of lipase from *Burkholderia Cepacia* on silica gel activated with cyanuric chloride


*Universidade Federal da Paraíba, Campus João Pessoa, PB, Brazil*

Several methods can be used to immobilize enzymes, however the immobilization of lipase by covalent bond can bring greater stability to the enzyme bound to carrier. In this context, the present study aimed to immobilize the lipase from *Burkholderia Cepacia* by covalent bonding on the surface silica gel activated with cyanuric chloride. Triazine compound onto silica surface was estimated by CHN elemental analysis, and infrared spectroscopy. The enzyme activity was monitored by UV-VIS, with absorbance measurements at 410 nm for p-nitrophenol produced enzymatically in the hydrolysis reaction of p-nitrophenylpalmitate. The data showed that the immobilization of organic molecules onto surface of reactive silica led to a stronger interaction between enzyme and the surface activated support, although the biological activity of the immobilized enzyme derivative was dependent on the loading of enzyme on the support.

**Keywords:** Silica gel organofunctionalized, cyanuric chloride, *Burkholderia Cepacia* lipase, covalent immobilization.


ataquimico@yahoo.com.br

*Cidade Universitária s/n*

*Castelo Branco - CEP: 58059-900*

*João Pessoa – PB - Brazil*