

KINETIC STUDIES OF IMMOBILIZED
 α -GALACTOSIDASE

H.D.J.G. Guneratna and C. Deepal-Mathew
Dept. of Biochemistry, Faculty of Medicine,
University of Colombo

α -Galactosidase was purified from coconut as described by Balasubramaniam and Mathew¹. Purified α -galactosidase was immobilized using physical, chemical and entrapment methods. Considering the immobilization methods used, the highest percentage bindings and retained activities were obtained when α -galactosidase was immobilized in 15% polyacrylamide gel and K-Carrageenan gel by entrapment and covalent binding to nylon pellets and nylon powder. Immobilized α -galactosidase obtained from these methods were used for kinetic studies. Optimum pH for immobilized enzymes and native enzyme were 5.5. At pH value below 5.5 the native enzyme showed higher activity than the immobilized enzymes. Thermal stability of the immobilized enzymes were higher than the native enzyme. Studies on the effect of temperature on enzyme activity showed that enzymes immobilized on nylon pellets and nylon powder had higher activity upto 60°C

Reference:

1. Balasubramaniam, K. and Mathew, C.D. (1986). Purification of α -galactosidase from coconut. Phytochemistry, 25(8): 1819