Effect Of Visible Light On Catalytic Hydrolysis Of P-Nitrophenyl Palmitate By The Pseudomonas Cepacia Lipase Immobilized On Sol–Gel Support

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ABSTRACT
This paper demonstrates *Pseudomonas cepacia* lipase catalyzed hydrolysis of *p*-nitrophenyl palmitate under irradiation of light with wavelengths of 250–750 nm. The reaction follows Michaelis–Menten Kinetics and the light irradiation increases the overall rate of hydrolysis. Using Lineweaver–Burk plot K_M and V_{max} values for the reaction in presence of light are found to be 39.07 and 66.67 mM/min/g, respectively; while for the same reaction under dark condition, the values are 7.08 and 10.21 mM/min/g. The linear form of enzyme dependent rate of reaction confirms that no mass-transfer limitations are present and the reaction is a kinetically controlled enzymatic reaction.

KEYWORDS: Light irradiation, Hydrolysis, *Pseudomonas cepacia*, p-Nitrophenyl palmitate

DOI: 10.1007/s00449-014-1213-6