

PARTITION BEHAVIOUR AND PARTIAL PURIFICATION OF ALKALINE PROTEASE FROM *NOCARDIOPSIS* SP. IN POLY (ETHYLENE GLYCOL)/PHOSPHATE AQUEOUS TWO-PHASE SYSTEMS

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The partitioning behaviour of alkaline protease, enzyme potential for application in detergents, was accomplished in various aqueous two-phase systems in order to investigate how changes factors such as PEG poly (ethylene glycol) molecular weight, pH, length tie line and NaCl concentration can modify the partition coefficient. The partitioning protease in aqueous two-phase system was influenced by the polymer concentrations, pH and sodium chloride concentration. When PEG-phosphate systems were analysed, it was found that depend on PEG molecular weight 550 to 8000 leads to a decrease in the K value from 44 to 1.3. Dependence between system pH was also noticed, this effect being important at lower/higher PEG molecular weight, where K minimum and maxima values were obtained at pH 7.0 and 10.0, respectively. The addition of NaCl led to increase in K for all the systems studied. Suitable conditions for protease purification were found in PEG 3350/phosphate system at pH 8.0 and NaCl 0.75M, showed purification of the 26 times. This method provides a simple process in a single step, to remove the contaminants and purification of enzyme produced by both fermentation from *Norcardiopsis* sp.