RINGKASAN

Telah dilakukan isolasi dan uji aktivitas spesifik enzim fosfolipase D dari kubis bunga dengan substrat lesitin. Fosfolipase D merupakan enzim yang dapat menghidrolisis ikatan ester antara gugus fosfat dan basa dari fosfolipida. Hasil isolasi difraksinasi bertingkat menggunakan amonium sulfat, yaitu : F1 (0-20 %), F2 (20-40 %), F3 (40-60 %), F4 (60-80 %), dan F5 (80-100 %) dilanjutkan dialisis. Aktivitas enzim diuji dalam sistem emulsi eter/air dan produk kolin yang dihasilkan dianalisa menggunakan spektrofotometer UV-Vis pada λ = 365 nm. Sedangkan kadar protein enzim ditentukan dengan metode Lowry.

Dari hasil karakterisasi diperoleh kondisi optimum enzim fosfolipase D kubis bunga adalah pada pH=5,6 (aktivitas spesifik = 12,59168 U/mg protein), temperatur 35 ^{0}C (aktivitas spesifik = 12,20720 U/mg protein), waktu inkubasi 75 menit (aktivitas spesifik = 12,41916 U/mg protein) dan konsentrasi $CaCl_2$ 60 mM (aktivitas spesifik = 12,65407 U/mg protein). Berdasarkan uji aktivitas spesifik terhadap semua fraksi enzim pada kondisi optimum tersebut diperoleh aktivitas spesifik tertinggi pada fraksi ke-2 sebesar 12,64831 U/mg protein.

SUMMARY

The Isolation and specific activity fixation of phospholipase D enzyme had been done from Cabbage with lecithin substrate. Phospholipase D is enzyme which can hydrolize ester bonding between phosphate and base of phospholipid. The result of isolation had been stages fractionated using amonium sulfat, i.e.: F1 (0-20 %), F2 (20-40 %), F3 (40-60 %), F4 (60-80 %), and F5 (80-100 %) continued with dialysis. The activity of enzyme was identified in eter / water emulsion system and the choline product had been analysed by UV-Vis spectrofotometric on λ = 365 nm. The concentration of enzyme protein had been calculated by Lowry method.

The result of characterization shows that optimum .conditional of enzyme happened with the pH = 5.6 (specific activity = 12.59168 U/mg protein), temperature 35 ^{0}C (specific activity = 12.20720 U/mg protein), incubation time 75 minutes (specific activity = 12.41916 U/mg protein), and activator concentration $CaCl_2$ 60 mM (specific activity = 12.65407 U/mg protein). Based on test of specific activity to all of enzyme fractions at the optimum condition had resulted the highest activity at second fraction is about 12.64831 U / mg protein.