KARAKTERISASI ENZIM KITINASE HASIL ISOLASI DARI KULTUR MURNI BAKTERI Vibrio fluvialis

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ABSTRACT

This research was done to characterize chitinase isolated from Vibrio fluvialis by determining optimum condition (pH; temperature; incubation time) and kinetic parameters ($K_m$ & $V_{max}$). Chitinase (EC 3.2.1.14) catalyze hydrolytic cleavage of the b-1,4-glicosidic bond in chitin by releasing N-acetyl-D-glucosamine. The isolation of chitinase was started by inoculating culture of Vibrio fluvialis into liquid medium for 34 hours. Chitinase activity was determined by measuring N-acetyl-D-glucosamine released during enzymatic reaction based on Somogyi-Nelson method. The result showed that optimum condition of chitinase was obtained at pH of 7.5; temperature of 45°C and incubation time of 120 minutes with maximum activity $1,41.10^2$ Unit ($P<0.01$), $K_m$ of 7.778% and $V_{max}$ of 0.066 mmol menit⁻¹.

Key words: characterize, isolated, Chitinase, Vibrio fluvialis

PENDAHULUAN


Proses pendegradasi kitin oleh bakteri kitinolitik yang dikatalisis oleh kitinase menimbulkan dampak buruk tehadap ekosistem perairan laut karena bakteri kitinolitik seperti Vibrio spp., Pseudomonas sp, dan Aeromonas sp akan menyebabkan sejumlah penyakit terutama pada hewan-hewan yang mengandung kitin sebagai komponen penyusun ekzoskeleton (Ratledge, 1990).

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