

**Paramitri, N, 2015, Optimasi Kristalisasi Ekstrak Enzim *Achatina fulica* Dengan Metode Pendinginan Larutan Lewat Jenuh, skripsi, dibawah bimbingan Prof. Dr. Afaf Baktir, M.S., Apt dan Prof. Dr. Ni Nyoman Tri Puspaningsih M.Si. Departemen Kimia, Fakultas Sains dan Teknologi, Universitas Airlangga**

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#### ABSTRAK

Telah dilakukan optimasi suhu kristalisasi dengan metode pendinginan larutan lewat jenuh optimasi suhu 3°C, 12°C, 25°C ekstrak enzim yang dipekatkan selama  $\pm$  20 menit. Pembentukan kristal pada larutan diamati dengan mikroskop binokuler. Larutan enzim yang telah di optimasi menghasilkan kristal terbaik dengan nilai unit aktivitas mencapai optimum pada suhu 25°C. Aktivitas spesifik ekstrak enzim kitinase 1,7427 U/mg dan aktivitas spesifik ekstrak enzim  $\beta$ -1,3-glukanase 0,4467 U/mg. Aktivitas spesifik kristal enzim kitinase 10,3211 U/mg pada suhu 25°C dan aktivitas spesifik kristal enzim  $\beta$ -1,3-glukanase 0,5245 U/mg pada suhu 25°C yang menunjukkan peningkatan nilai aktivitas spesifik yang signifikan dari ekstrak enzim *Achatina fulica* hingga mengkristal selama 7 hari.

Kata kunci: Enzim *Achatina fulica*, kitinase,  $\beta$ -1,3-glukanase, kristal enzim, *C.albican*

**Paramitri, N, 2015, Optimization Crystallization Extract Enzyme *Achatina fulica* with Cooling Method Supersaturated Solution, undergraduate thesis, Prof. Dr. Afaf Baktir, M.S., Apt. and Prof. Dr. Ni Nyoman Tri Puspaningsih M.Si Department of Chemistry, Science and Technology Faculty, Universitas Airlangga, Surabaya**

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### ABSTRACT

Optimization temperature has to be crystallization with cooling optimization supersaturated solution method temperature 3°C, 12°C, 25°C enzyme extract concentrated for ± 20 minutes. The formation of crystals in solution was observed with a binocular microscope. Enzyme solution with a concentration that has been in the optimization produces the best crystals with unit values reach optimum activity at a temperature of 25°C. The specific activity of chitinase enzyme extract 1,7427 U/mg and the specific activity of the enzyme extract β-1,3-glucanase 0,4467 U/mg. The specific activity of chitinase enzyme crystals 10,3211 U/mg at a temperature of 25°C and the specific activity of enzyme crystal β-1,3-glucanase 0,5245 U/mg at a temperature of 25°C which showed an increase in the value of the specific activity of the enzyme extract signifikan *Achatina fulica* to crystallize for 7 days.

Keywords: Enzyme *Achatina fulica*, chitinase, β-1,3-glucanase, enzyme crystals, *C.albicans*