



INTISARI

Penelitian ini bertujuan untuk melakukan kloning gen kitinase dan ekspresi protein gen kitinase rekombinan dari isolat bakteri kitinolitik KKT-06 (*Bacillus* sp). Penelitian ini dilakukan pada bulan Oktober 2016 hingga Agustus 2017, bertempat di Laboratorium Kesehatan Ikan dan Lingkungan dan Laboratorium Mutu dan Keamanan Hasil Perikanan, Departemen Perikanan Fakultas Pertanian, Universitas Gadjah Mada. Penelitian ini menggunakan isolat KKT-06 yang telah diisolasi, dimurnikan, diuji aktivitas kitinolitiknya, dan diketahui karakteristik kitinolitiknya sebagai spesies *Bacillus* sp. Metode yang dilakukan adalah penyegaran bakteri, ekstraksi DNA, isolasi gen kitinase, pemotongan dan pemurnian DNA, ligasi dan transformasi, sekuensing, dan ekspresi protein menggunakan elektroforesis SDS Page. Hasil dari penelitian ini adalah sampel memiliki homologi sebesar 99% dengan gen kitinase dari bakteri *Bacillus cereus*, gen *insert* sebesar kurang lebih 1.000 bp, dan berat protein dari KKT-06 rekombinan 40,8 kDa yang terduga tidak terekspresi.

Kata Kunci : kloning, *Bacillus* sp., kitinase, ekspresi gen



Abstract

This study is aimed to clone and to express of the protein of the recombinant chitinase gene from the chitinolytic bacterial isolate KKT-06 (*Bacillus* sp.). The study was conducted in October 2016 until August 2017, at Fish and Environment Health Laboratory and Quality and Safety of Fisheries Products Laboratory Department of Fisheries Universitas Gadjah Mada. This study used KKT-06 isolate whose chitinolytic activity has been isolated, purified and tested, and whose chitinolytic characteristics has been recognized as *Bacillus* sp. The methods performed are bacterial refreshment, DNA extraction, isolation, restriction, purification chitinase gene, ligation and tranformation, and protein expression using electrophoresis SDS Page. The result of the study is a 99% homology sample with a chitinase gene from *Bacillus cereus* bacteria, an insert gene of approximately 1,000 bp, and a molecular weight of protein from KKT-06 recombinant 40,8 kDa is presumed not expressed .

Keywords: cloning, *Bacillus* sp., chitinase, expression of gene