

ABSTRAK

Rahmiati, 24020112420010, **Eksplorasi Mikroba Penghasil Enzim-Enzim Hidrolitik Di Kawasan Taman Nasional Lore Lindu Sulawesi Tengah** dibimbing oleh Sri Pujiyanto dan Endang Kusdiyantini

Taman Nasional Lore Lindu (TNLL) merupakan kawasan yang memiliki kekayaan flora, fauna dan mikroba, sehingga memungkinkan terdapat keanekaragaman mikroba penghasil enzim hidrolitik. Eksplorasi pencarian sumber penghasil enzim hidrolitik perlu dilakukan dari mikroba di Indonesia. Penelitian ini bertujuan untuk mendapatkan isolat bakteri yang mampu menghasilkan enzim hidrolitik serta karakteristiknya. Isolasi di Taman Nasional Lore Lindu. Isolasi dilakukan dengan cara *spread plate*. Isolat murni di seleksi kemampuan penghasil enzim hidrolitik pada media selektif. Pengukuran aktivitas enzim dengan perhitungan indeks hidrolitiknya. Hasil menunjukkan ada tiga belas isolat di uji zona bening, 2 isolat bakteri menghasilkan enzim protease, 1 isolat bakteri menghasilkan enzim lipase, 6 isolat bakteri menghasilkan enzim amilase sedangkan 4 isolat menghasilkan enzim selulase. Uji aktivitas enzim amilase menggunakan metode DNS, menunjukkan bahwa isolate bakteri L10T3 memiliki aktivitas optimum pada pH 7, dan pada suhu 30°C dengan aktivitas sebesar 0.040 U/mL dan 0.029 U/mL.

Kata kunci: *Taman Nasional Lore Lindu, enzim hidrolitik, isolat bakteri.*

ABSTRACT

Rahmiati, 24020112420010, exploration of hydrolytic microbes in Lore Lindu National Park Central Sulawesi. Supervised by Sri Pujianto and EndangKusdiyantini

Lore Lindu National Park (TNLL) is an area that contain flora, fauna and microbes. It is allowing the diversity of microbes that produce hydrolytic enzyme. This potential is increasing exploration about hydrolytic enzyme from microbes in Indonesia. The aims of this study are obtaining bacterial isolates can produced hydrolytic enzyme and to know their characteristics. Isolation by a spread plate. Isolates in the selection hydrolytic enzyme producing selective media. Measurement of the activity of the enzyme with hydrolytic index. The results of study were thirteen isolates clearing zone test, 2 protease enzyme bacterial isolates, 1 lipase enzyme bacterial isolates, 6 amylase enzyme bacterial isolates, while 4 cellulase enzyme bacterial isolates. Examination of Amylase enzyme activity was done using DNS method. L10T3 showed that the bacterial isolate optimum activity at pH 7 and at a temperature of 30°C with an activity of 0.040 U / mL and 0.029 U / mL.

Key word: Lore Lindu National Park, hydrolytic enzyme. isolation of bacteria