ISOLATION AND CHARACTERIZATION
SELULOLYTIC AEROBIC BACTERIA FROM
Rhizophora LITTER LEAVES AT PENUNGGUL BEACH
WATERWORKS, PASURUAN, JAWA TIMUR

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Abstract

This study aims to isolation, characterization and test the ability of cellulose degrading bacteria from litter leaves Rhizophora. Sampling is done on 5 randomly point. Steps of the research is enrich bacterial on PCS media, isolation on the Cellulose Congo Red Agar (CCRA) media, purification and biochemistry tests, testing the Hidrolysis Capacity (HC) with Carboxymethylcellulose (CMC) as a source of cellulose and cellulose degradation test with fresh leaf Rhizophora as a source of cellulose.

Research results obtained from 6 pure isolat cellulose degrading bacteria with code 9a, 11ba, 11a1a2, 20c1, 21a and 21b. Sixth isolat tend to enter into genus Sporosarcina, Halomonas, Bacillus, Lactobacillus and Sporospirillum. HC test showed that isolat bacteria 9a and isolat bacteria 20c1 produce a clear zone at most. However, with one way ANOVA analysis, to test that in the degradation of fresh leaf Rhizophora of control with the addition of isolat not significantly different. But from physical condition of leaves and the media after 7 days incubation period indicates that there has been a biological degradation (the addition of isolat
bacteria). The Non-parametric Krustal Wallis test showed that the most effective treatment to degradation of fresh leaf *Rhizophora* is the addition of isolate bacteria 21a and 21b.

**Keywords:** cellulose, clear zone, hidrolysis capacity, degradation and growth curve.