THE INFLUENCE OF ORGANIC WASTE SUBSTRATE AGAINST THE ACTIVITY OF LYPASE ENZYME FROM WONOREJO MOLDS ISOLATE

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Abstract
Increasing the accumulation of organic waste liquid that containing lipids in the neighborhood need to overcome. This research is aimed to know the activity of an enzyme lipase from mold isolate Mortierella sp. T3.G1, Aspergillus niger T2.1, and Penicillium sp.1 T4.E3 singly and a consortium on different medium liquid waste organic.

The parameters that are tested in this research is the degradation of lipid and the activity of an enzyme lipase. Organic waste liquid that used there are processing fish wastewater, septic tank wastewater and used cooking waste oil. The influence data of medium against the activity of an enzyme protease analyzed using Anova One-Way and continued with Duncan test.

The result showed that medium and isolates affecting the activity of enzymes lipase with P value=0,000. Correlation of activity value and degradation value indicated that isolate Aspergillus niger is the highest in three organic waste liquid with activity lipase 0,0997 U/mL and degradation lipid 58,43 % on processing fish wastewater, activity lipase 0,1511 U/mL and degradation lipid 83,95 % on used cooking waste oil and lipase 0,0697 U/mL and degradation lipid 67,36 % on septic tank wastewater.

Keywords: Lipase, Lipid Degradation, Organic Waste,