

**ISOLATION AND CHARACTERIZATION OF LYPOLYTIC
BACTERIA FROM MARINE AND FRESHWATER
ENVIRONMENT**

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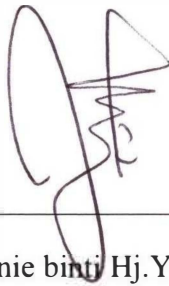
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This Final Year Project Report entitled “ **The Isolation and Characterization of Lypolytic Bacteria from Marine and Freshwater Environment**” was submitted by Nazeera binti Ishak, in partial fulfillment of the requirement for the Degree of Bachelor of Science(Hons.) Biology, in the Faculty of Applied Science, and was approved by



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ABSTRACT

ISOLATION AND CHARACTERIZATION OF LYPOLYTIC BACTERIA FROM MARINE AND FRESHWATER ENVIROMENT

The lipase enzyme was highly demanded in the bio-catalysts industry for various applications. However, there are deficiencies of the lipase enzyme due to the high cost of lipase production. Thus, marine and freshwater bacteria will be explored for their lipase activity for their capability to produce large amount of lipase in a short time. The halozone formation after 24 hours incubation on tween 80 agar plate for lypolytic bacteria colony for marine port area water bacteria and river polluted area sediment and the *Serratia s.p* recorded. Both used the *E.Coli sp.* as negative control which shows negative halozone formation. The lipase assay carried out by using the titrimetric method showed that *Serratia s.p* and R_PA_S bacteria 3 and M_PA_W bacteria 3 showed the highest lipase activity after 48 hours incubation which was 0.359 U/ml, 0.361 U/ml and 0.306 U/ml. This indicates that, the presence of lypolytic bacteria in marine and freshwater was due to the presence of waste contaminated oil.