

**OPTIMIZATION OF LUMINESCENT BACTERIA BY PH
ALTERATION**

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**Final Year Project Report Submitted in
Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science (Hons.) Biology
In the Faculty of Applied Science
Universiti Teknologi MARA**

JULY 2016

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ABSTRACT

OPTIMIZATION OF LUMINESCENT BACTERIA BY PH ALTERATION

Luminescent bacteria is a bacterial species that is capable of producing its own light and is a significant environmental marker. The purpose of this study is to isolate and optimize the growth of luminescent bacteria by altering the medium's pH. The luminescent bacteria strain was isolated from seawater, fishes and squid from Port Dickson, Negeri Sembilan. TCBS agar was used to select a *Vibrio spp.* The *Vibrio* strain was then cultured in broth medium. Various degree of pH medium was modified to test the optimum pH condition for growth of the *Vibrio spp.* Several biochemical tests were also conducted. The findings showed only the isolate from squid showed luminescent characteristic. A green coloured colony was observed on the TCBS agar and colonies showed a blue-green illumination in dark condition. The luminescent can be observed at 15 hours of incubation period and not more than 24 hours. In conclusion, the best pH condition for optimum growth of this luminescent bacteria is in the range of pH 7 to 9. Continuous studies such as the use of luminometer and molecular testing need to be done in order to confirm the species of *Vibrio spp.*