

**STUDY ON THE EFFECTS OF DIFFERENT
CONCENTRATIONS OF NONYLPHENOL ON
BIOLUMINESCENT BACTERIA**

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ABSTRACT

STUDY ON THE EFFECTS OF DIFFERENT CONCENTRATIONS OF NONYLPHENOL ON BIOLUMINESCENT BACTERIA

Bioluminescent bacteria is a bacterial species that have the ability to produce light and is known as significant biological indicator. The purpose of this study is to isolate bioluminescent bacteria from marine organisms and study the effect of different concentrations of chemical called Nonylphenol on this bacteria. The bioluminescent bacteria were isolated from fish and squid from local market in Kuala Pilah, Negeri Sembilan. Luminescent agar were used for isolation of the bacteria and the bacteria were then cultured in broth medium. Five different concentrations of Nonylphenol were fixed to test for the effect of the bacterial growth. The gram staining procedures were proceed to detect whether the bacteria is categorize as gram negative or gram positive bacteria. The bacteria was again cultured on TCBS agar and green coloured colonies were shown during the observation under Rechargeable UV Lamp in the laboratory. The luminescent characteristic can only be observed from 16 to 24 hours of incubation period. In conclusion, the most tolerance concentration of Nonylphenol for the growth of bioluminescent bacteria is in the range of 0.5 mg/mL to 1.0 mg/mL. Continuous studies such as biochemical test and molecular test need to be done in order to study the species of these bioluminescent bacteria.