Enhancement of cyanobacterial control by fungi degraded palm oil trunk

By: Yusoff, TNT (Yusoff, Tengku Nadiah T.)[1]; Rafatullah, M (Rafatullah, Mohd)[1]; Ismail, N (Ismail, Norli)[1]; Zainuddin, Z (Zainuddin, Zaima)[1]; Lalung, J (Lalung, Japareng)[1]

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Abstract

Aims: Cyanbacterial bloom can cause unpleasant smell and taste. It can also produce toxins that can be harmful to animals or human. The capability of plant materials to control cyanobacterial bloom has been reported by many researchers. Among the plant materials were barley straw, banana skin, orange peel and many more. It was also showed that the ability of the plant material, especially barley straw to control cyanobacteria might likely involved complex microbial degradation and enhanced by fungal degradation. Therefore, experiments were set up to test the effect of fungi-degraded palm oil trunk on cyanobacterial growth.

Methodology and results: In the study, 1 g of palm oil trunk was pre-treated with fungus Lichtheimia sp, for 30 days to allow degradation to occur. After the incubation, the fresh and degraded palm oil trunk was introduced to cyanobacterial culture for 30 days. Growth of culture were estimated based on its chlorophyll a concentration. This study showed an increase ability of fungi-degraded palm oil trunks in inhibiting cyanobacterial growth.

Conclusion, significance and impact of study: The results strengthened the theory of involvement of microbial degradation in controlling cyanobacterial growth.

Keywords

Author Keywords: Biological control; cyanobacteria; fungal degradation; palm oil trunk
KeyWords Plus: INHIBITION; MECHANISMS; EXTRACTS; FRANCE; ALGAE; RIVER

Author Information

Reprint Address: Lalung, J (reprint author)

[+] Univ Sains Malaysia, Sch Ind Technol, Minden 11800, Pulau Pinang, Malaysia.

Addresses:

[+] [1] Univ Sains Malaysia, Sch Ind Technol, Minden 11800, Pulau Pinang, Malaysia

[+] [2] Int Islamic Univ Malaysia, Dept Biotechnol, Kuantan 25200, Pahang, Malaysia

E-mail Addresses: japareng@usm.my

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