

**PHYTOREMEDIATION OF POLYCYCLIC AROMATIC
HYDROCARBON OF *Impatiens balsamina* ASSOCIATED
WITH *Pseudomonas* sp.**

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ABSTRACT

PHYTOREMEDIATION OF POLYCYCLIC AROMATIC HYDROCARBON OF *Impatiens balsamina* ASSOCIATED WITH *Pseudomonas* sp.

Polycyclic aromatic hydrocarbons (PAHs), also known as polynuclear aromatic hydrocarbons, are potent atmospheric pollutants consisting of fused aromatic rings and do not carry or contain heteroatoms/substituents. In this study a bacteria-strain was used to enhance phytoremediation process with the aid of flowering plants which able to grow wildly that is *Impatiens balsamina*. *Pseudomonas* sp. which was among PGPR was selected since it was able to colonize plant roots. Bacteria strains were inoculated and growth onto the plate in laboratory of UiTM, Kuala Pilah, with the presence of PAHs which was anthracene and phenanthrene. GC-MS was used in this study to analyse the concentration of phenanthrene and anthracene before and after 15 days. After 15 days, it was found out that, without the presence of *Pseudomonas* sp. in soil both PAHs able to be remove up to 90-100% from day 1. As compared to the purposely adding *Pseudomonas* sp. which is only 13-30% of removal of PAHs. This study also showed that without the presence of bacteria-degrading such as *Pseudomonas* sp., *Impatiens balsamina* alone able to degrade the PAHs.