

# Web of Science

Search

Search Results

My Tools ▾

Search History

Marked List

 Look Up Full Text


Save to EndNote online ▾

Add to Marked List

1 of 1

## ISOLATION OF BACTERIA FROM THE ACIDIC PEAT SWAMP FOREST SOIL AND THEIR LIGNIN DEGRADATION POTENTIAL

By: [Roslan, MAM](#) (Roslan, Muhamad Aidilfitri Mohamad)<sup>[1]</sup>; [Amirudin, NA](#) (Amirudin, Nur Azam)<sup>[1]</sup>; [Abidin, ZAZ](#) (Abidin, Zaima Azira Zainal)<sup>[1]</sup>; [Omar, SM](#) (Omar, Suhaila Mohd)<sup>[1]</sup>

### JURNAL TEKNOLOGI

Volume: 77 Issue: 24 Pages: 77-81

Published: 2015

### Abstract

The tropical peat swamp forest in Malaysia has reduced significantly due to increasing pressure for development and demand for agricultural land. Pekan peat swamp forest is part of the 200,000 hectares of peat swamp forest located in Pahang, Peninsular Malaysia. While more extensive studies were done on flora and fauna, the study on microbial diversity in this habitat is very limited. The highly acidic environment, low concentrations of nutrients and anoxic condition of the peat are among challenges that hampered the cultivation of microorganism from this environment. In this study two types of agarbased medium, M1 minimal medium (M1) and peat water medium (PW) supplemented with glucose, methanol and lignin were used to isolate bacteria from the peat sediment. In comparison to M1, the use of PW has resulted with higher number of isolates with different morphologies. The PW mainly contains the acidic peat water that was collected from the sampling location. Based on the growth on medium supplemented with lignin, selected isolates were identified using 16s rDNA sequencing. At least three of the isolates showed sequence similarity to Burkholderia sp., which is one of the common species, studied on their ligninase- producing abilities. The results from this study serve as the preliminary data for further work on growth characteristics and enzymatic potential of isolates from acidic peat swamp soil.

### Keywords

**Author Keywords:** [Peat swamp forest](#); [acidic environment](#); [bacteria](#); [16s rDNA analysis](#); [lignin degradation](#)

### Author Information

**Reprint Address:** Omar, SM (reprint author)

- + Int Islamic Univ Malaysia, Kulliyah Sci, Dept Biotechnol, Kuantan Campus, Jalan Sultan Ahmad Shah, Bandar I, Kuantan 25200, Malaysia.

#### Addresses:

- + [ 1 ] Int Islamic Univ Malaysia, Kulliyah Sci, Dept Biotechnol, Kuantan Campus, Jalan Sultan Ahmad Shah, Bandar I, Kuantan 25200, Malaysia

**E-mail Addresses:** [osuhaila@iium.edu.my](mailto:osuhaila@iium.edu.my)

### Funding

Funding Agency	Grant Number
Endowment B from International Islamic University	EDW B 14-196-1081
Ministry of Higher Education Malaysia	FRGS14-154-0395

[View funding text](#)

### Citation Network

0 Times Cited

[19 Cited References](#)

[View Related Records](#)



[Create Citation Alert](#)

*(data from Web of Science Core Collection)*

### All Times Cited Counts

0 in All Databases

0 in Web of Science Core Collection

0 in BIOSIS Citation Index

0 in Chinese Science Citation Database

0 in Data Citation Index

0 in Russian Science Citation Index

0 in SciELO Citation Index

### Usage Count

Last 180 Days: 0

Since 2013: 0

[Learn more](#)

### This record is from:

**Web of Science Core Collection**  
- Emerging Sources Citation Index

### Suggest a correction

If you would like to improve the quality of the data in this record, please [suggest a correction](#).

**Publisher**

PENERBIT UTM PRESS, PENERBIT UTM PRESS, SKUDAI, JOHOR, 81310, MALAYSIA

**Categories / Classification**

**Research Areas:** Engineering

**Web of Science Categories:** Engineering, Multidisciplinary

**Document Information**

**Document Type:** Article

**Language:** English

**Accession Number:** WOS:000218636200014

**ISSN:** 0127-9696

**eISSN:** 2180-3722

**Other Information**

**IDS Number:** V3V9N

**Cited References in Web of Science Core Collection:** 19

**Times Cited in Web of Science Core Collection:** 0