

Accepted Manuscript

Title: Composting physics: A science behind bio-degradation of lignocellulose aquatic waste amended with inoculum and bulking agent

Authors: Mayur Shirish Jain, Mohit Daga, Ajay S. Kalamdhad

PII: S0957-5820(18)30069-7
DOI: <https://doi.org/10.1016/j.psep.2018.03.017>
Reference: PSEP 1323

To appear in: *Process Safety and Environment Protection*

Received date: 22-1-2018
Revised date: 7-3-2018
Accepted date: 8-3-2018

Please cite this article as: Jain, Mayur Shirish, Daga, Mohit, Kalamdhad, Ajay S., Composting physics: A science behind bio-degradation of lignocellulose aquatic waste amended with inoculum and bulking agent. *Process Safety and Environment Protection* <https://doi.org/10.1016/j.psep.2018.03.017>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



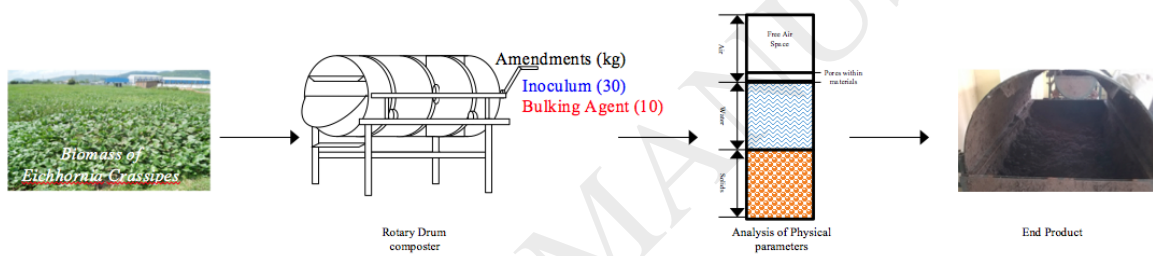
Composting physics: A science behind bio-degradation of lignocellulose aquatic waste amended with inoculum and bulking agent

Mayur Shirish Jain*, Mohit Daga , Ajay S Kalamdhad

Department of Civil Engineering, Indian Institute of Technology Guwahati, Guwahati 781039, Assam, India

*Corresponding author: mayur.jain0111@gmail.com

Graphical abstract



Highlights

- Thermophilic phase was retained for 6 days.
- Volume reduction was observed to be 90% after composting.
- Free air space and bulk density are linearly correlated.
- Bulk density and moisture content are negatively correlated.

Abstract

The composting is a proven technology to manage various organic wastes and reduces organic matter, heavy metals and harmful pathogens. The current research work provides the insight on the physics involved in composting of lignocellulose aquatic waste amended with inoculum and the bulking agent that plays a crucial role in handling, management, and

Download English Version:

<https://daneshyari.com/en/article/6974105>

Download Persian Version:

<https://daneshyari.com/article/6974105>

[Daneshyari.com](https://daneshyari.com)