Taylor & Francis Online

Log in | Register

Home ▶ All Journals ▶ Journal of Environmental Science and Health, Part B ▶ List of Issues ▶ Volume 56, Issue 5 ▶ Composting of winery waste and character ....

Journal of Environmental Science and Health, Part B ›
Pesticides, Food Contaminants, and Agricultural Wastes
Volume 56, 2021 - Issue 5

23 Views | 0 CrossRef citations to date | 0 Altmetric

Research Article

Composting of winery waste and characteristics of the final compost according to Brazilian legislation

Eduardo Souza Costa Barros, Miriam Cleide Cavalcante de Amorim, Nelci Olszevski & Paula Tereza de Souza e Silva

Pages 447-457 | Published online: 24 Mar 2021

Download citation https://doi.org/10.1080/03601234.2021.1900694

Check for updates

Full Article Figures & data References Citations Metrics Reprints & Permissions Get access

Abstract

The waste generated in the production of wine and grape juice is characterized by a high concentration of organic matter, when properly treated, can serve as sustainable strategies for its use and destination, and among these, the production of

biocompost. Thus, the objective of this study was to evaluate the process of composting grape marc, sheep manure, and mango leaves, evaluating in the biocompost its physical-chemical, nutritional and microbiological characteristics for use in agriculture. The composting pile assembly followed the proportion of 30% of sheep manure as nitrogenous material and 70% of carbon-rich material (divided into 50% of grape marc and 20% of hose leaves), the initial C/N ratio was 33:1, and the process lasted 120 days according to legislation. When evaluating the results, the process occurred in an accelerated manner, where at 30 days the biocompost was already stabilized, and at the end of the process (120 days) it presented a C/N ratio of 5.85, as well as acceptable levels for the macronutrients K and P, and without risk of phytotoxicity, and could be used as organic fertilizer or as soil conditioner, reducing environmentally inadequate destination and generating savings with their reinsertion in the production chain.

Keywords: Agricultural reuse agroindustry biocompost C/N organic waste

Previous article **View** issue table of contents **Next** article

Acknowledgements

We thank the Coordination for the Improvement of Higher Level Personnel (CAPES), the Post-Graduation Program in Agricultural Engineering of the Federal University of São Francisco Valley (UNIVASF), the 'Quintas de São Braz' Winery, as well as the Laboratory of Soil Physics and Laboratory of Environmental Engineering (LEA), and the Brazilian Agricultural Research Corporation (EMBRAPA).

Related research

Recommended articles | Cited by

CONSERVATION OF AMMONIA DURING FOOD WASTE COMPOSTING

L.F. Al-Jabi et al.

Environmental Technology

Published online: 29 Aug 2008

Perspective

Compost Science & Utilization

Published online: 23 Jul 2013

Effect of Food Waste Compost on the Antler-Type Fruiting Body Yield of Ganoderma lucidum

Eun-Young Jo et al.

Mycobiology

Published online: 19 Jun 2018

View more

Information for

Authors
Corporate partners
Editors
Librarians
Societies

Open access

Overview
Open journals
Open Select
Dove Medical Press
F1000Research

Opportunities

Reprints and e-prints
Advertising solutions
Accelerated publication
Corporate access solutions

Help and information

Help and contact
Newsroom
All journals
Books

Keep up to date

Register to receive personalised research and resources by email

Sign me up

Copyright © 2021 Informa UK Limited Privacy policy Cookies Terms & conditions Accessibility

Registered in England & Wales No. 3099067
5 Howick Place | London | SW1P 1WG