

Accepted Manuscript

Title: Effects of a combination of lipases immobilised on desilicated and thiol-modified ZSM-5 for the synthesis of ethyl esters from macauba pulp oil in a solvent-free system

Authors: Carina Akemi Araki, Sílvia Miguel Parmegiani Marcucci, Lidiane Sabino da Silva, Celso Hissao Maeda, Pedro Augusto Arroyo, Gisella Maria Zanin



PII: S0926-860X(18)30277-1
DOI: <https://doi.org/10.1016/j.apcata.2018.06.007>
Reference: APCATA 16695

To appear in: *Applied Catalysis A: General*

Received date: 7-4-2018
Revised date: 2-6-2018
Accepted date: 5-6-2018

Please cite this article as: Araki CA, Marcucci SMP, da Silva LS, Maeda CH, Arroyo PA, Zanin GM, Effects of a combination of lipases immobilised on desilicated and thiol-modified ZSM-5 for the synthesis of ethyl esters from macauba pulp oil in a solvent-free system, *Applied Catalysis A, General* (2018), <https://doi.org/10.1016/j.apcata.2018.06.007>

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.

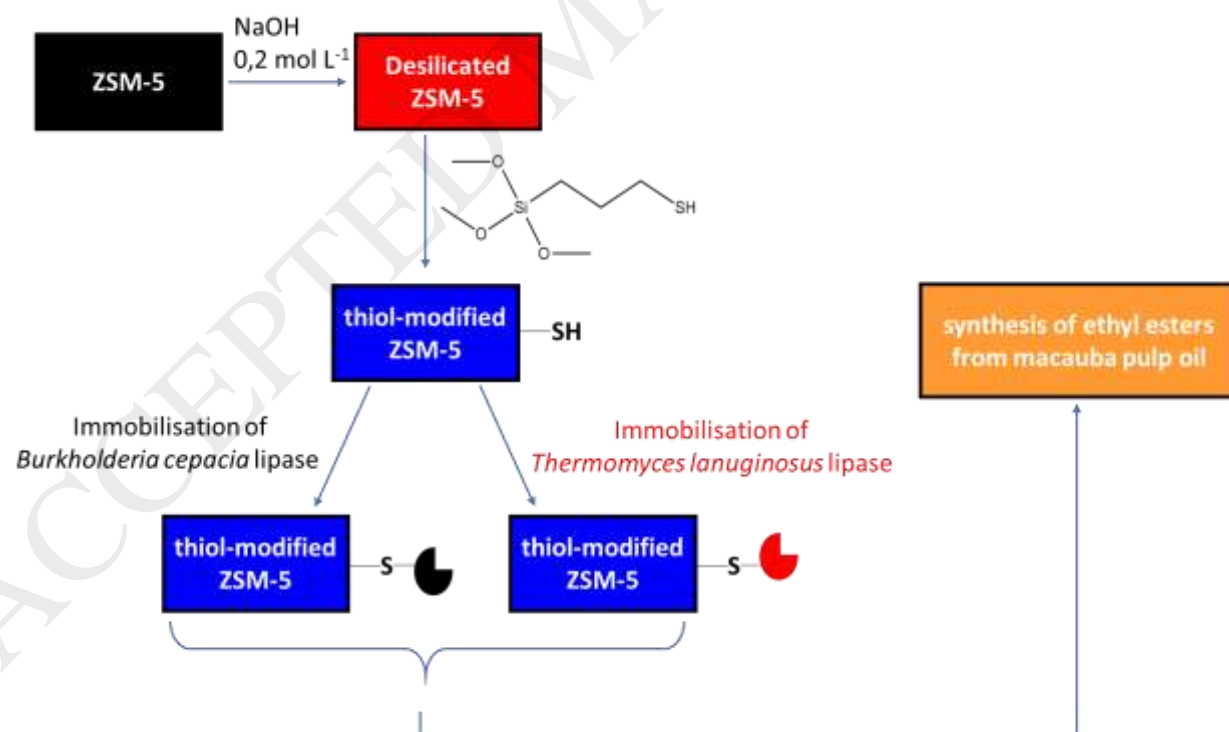
Effects of a combination of lipases immobilised on desilicated and thiol-modified ZSM-5 for the synthesis of ethyl esters from macauba pulp oil in a solvent-free system

Carina Akemi Araki*, Sílvia Miguel Parmegiani Marcucci, Lidiane Sabino da Silva, Celso Hissao Maeda, Pedro Augusto Arroyo, Gisella Maria Zanin

Department of Chemical Engineering, Laboratory of Heterogeneous Catalysis and Biodiesel and Laboratory of Enzymatic Technology, State University of Maringá - UEM, Maringá/PR, Brazil

*Corresponding author. E-mail address: carina.araki@gmail.com

Graphical abstract



Download English Version:

<https://daneshyari.com/en/article/6496556>

Download Persian Version:

<https://daneshyari.com/article/6496556>

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