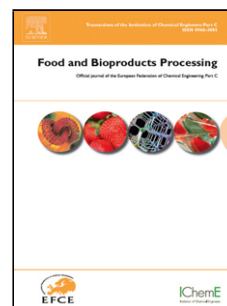


Accepted Manuscript

Title: Biodegradation of vegetable residues by polygalacturonase-agar using a trickle-bed bioreactor

Authors: Yuly A. Ramírez-Tapias, Cintia W. Rivero, Catalina Giraldo-Estrada, Claudia N. Britos, Jorge A. Trelles



PII: S0960-3085(18)30424-3
DOI: <https://doi.org/10.1016/j.fbp.2018.06.006>
Reference: FBP 971

To appear in: *Food and Bioprocess Technology*

Received date: 28-7-2017
Revised date: 28-6-2018
Accepted date: 29-6-2018

Please cite this article as: Ramírez-Tapias, Yuly A., Rivero, Cintia W., Giraldo-Estrada, Catalina, Britos, Claudia N., Trelles, Jorge A., Biodegradation of vegetable residues by polygalacturonase-agar using a trickle-bed bioreactor. *Food and Bioprocess Technology* <https://doi.org/10.1016/j.fbp.2018.06.006>

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.

Biodegradation of vegetable residues by polygalacturonase-agar using a trickle-bed bioreactor

Yuly A. Ramírez-Tapias^{a,b}, Cintia W. Rivero^{a,b}, Catalina Giraldo-Estrada^c, Claudia N. Britos^b and Jorge

A. Trelles^{a,b*}

^aLaboratory of Sustainable Biotechnology (LIBioS), National University of Quilmes, Roque Sáenz Peña 352, Bernal B1876BXD, Argentina

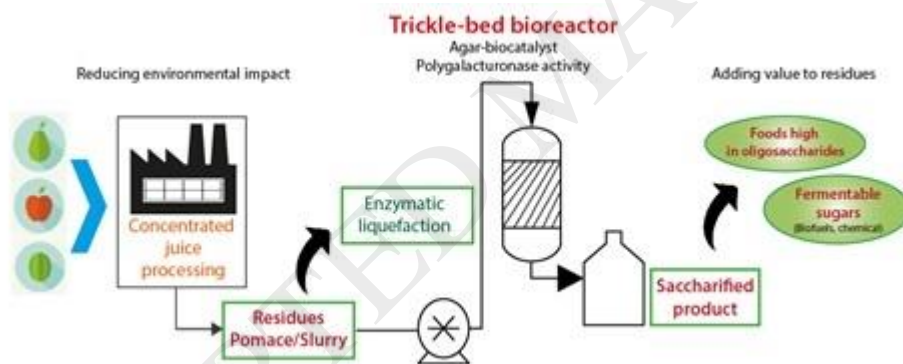
^bNational Scientific and Technical Research Council (CONICET), Godoy Cruz 2290 CABA C1425FQB, Argentina

^cEAFIT University, Carrera 49 N° 7 Sur-50, El Poblado 050021, Colombia.

* Corresponding author. Tel.: +54 1143657100 (ext 5645); fax: +54 1143657132.

E-mail address: jtrelles@unq.edu.ar (Jorge A. Trelles).

Graphical abstract



Highlights

- Heterogeneous agar-biocatalyst development with polygalacturonase activity
- Reusability up to 48 successive hydrolytic reactions demonstrated high efficiency
- Mg^{2+} in the biocatalyst improved its mechanical properties and protein stabilization
- Packed bed bioreactor operation for enzymatic liquefaction of vegetable residues

Download English Version:

<https://daneshyari.com/en/article/6488312>

Download Persian Version:

<https://daneshyari.com/article/6488312>

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