

## Accepted Manuscript

Effect of digestate disintegration on anaerobic digestion of organic waste

Matthijs H. Somers, Samet Azman, Ivona Sigurnjak, Karel Ghyselbrecht, Erik Meers, Boudewijn Meesschaert, Lise Appels

PII: S0960-8524(18)31130-1  
DOI: <https://doi.org/10.1016/j.biortech.2018.08.036>  
Reference: BITE 20319

To appear in: *Bioresource Technology*

Received Date: 12 June 2018  
Revised Date: 6 August 2018  
Accepted Date: 8 August 2018

Please cite this article as: Somers, M.H., Azman, S., Sigurnjak, I., Ghyselbrecht, K., Meers, E., Meesschaert, B., Appels, L., Effect of digestate disintegration on anaerobic digestion of organic waste, *Bioresource Technology* (2018), doi: <https://doi.org/10.1016/j.biortech.2018.08.036>

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.



**Effect of digestate disintegration on anaerobic digestion of organic waste**

Matthijs H. Somers<sup>a</sup>, Samet Azman<sup>a</sup>, Ivona Sigurnjak<sup>b</sup>, Karel Ghyselbrecht<sup>c</sup>, Erik Meers<sup>b</sup>,  
Boudewijn Meesschaert<sup>c</sup>, Lise Appels<sup>a\*</sup>

<sup>a</sup> Cluster for Sustainable Process Technology, Department of Chemical Engineering, KU Leuven, De Nayer Campus, J. de Nayerlaan 5, B-2860 Sint-Katelijne-Waver, Belgium.

<sup>b</sup> Laboratory of Analytical Chemistry and Applied Ecochemistry, Department of Green Chemistry and Technology, Ghent University, Coupure links 653, B-9000 Gent, Belgium.

<sup>c</sup> Cluster for Bio-engineering Technology, Department of Microbial and Molecular Systems, KU Leuven, Bruges Campus, Spoorwegstraat 12, B-8200 Brugge, Belgium.

\*corresponding author

lise.appels@kuleuven.be

KU Leuven Campus De Nayer J. de Nayerlaan 5, B-2860 Sint-Katelijne-Waver

Phone: +32(0)15/ 31.69.44

**Abstract**

Recently, digestate disintegration gained interest as an alternative strategy to feedstock pretreatment for anaerobic digestion. This study evaluated the effect of three different digestate disintegration methods (hydrogen peroxidation, ozone treatment and ultrasound) on manure digestate, potato waste digestate and mixed organic waste digestate. Lab-scale anaerobic digestion experiments were carried out by adding disintegrated digestate to the related substrate and inoculum with

Download English Version:

<https://daneshyari.com/en/article/7065733>

Download Persian Version:

<https://daneshyari.com/article/7065733>

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