Accepted Manuscript

Title: Methane oxidation in industrial biogas plants – insights in a novel methanotrophic environment evidenced by pmoA gene analyses and stable isotope labelling studies

Authors: Tobias May, Daniela Polag, Frank Keppler, Markus Greule, Liane Müller, Helmut König



2

PII:	S0168-1656(18)30037-3
DOI:	https://doi.org/10.1016/j.jbiotec.2018.01.022
Reference:	BIOTEC 8110
To appear in:	Journal of Biotechnology
Received date:	13-8-2017
Revised date:	24-1-2018
Accepted date:	31-1-2018

Please cite this article as: May T, Polag D, Keppler F, Greule M, Müller L, König H, Methane oxidation in industrial biogas plants – insights in a novel methanotrophic environment evidenced by pmoA gene analyses and stable isotope labelling studies, *Journal of Biotechnology* (2010), https://doi.org/10.1016/j.jbiotec.2018.01.022

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.

ACCEPTED MANUSCRIPT

Journal of Biotechnology

Methane oxidation in industrial biogas plants – insights in a novel methanotrophic environment evidenced by pmoA gene analyses and stable isotope labelling studies.

Tobias May^{a*}, Daniela Polag^b, Frank Keppler^{b,c}, Markus Greule^b, Liane Müller^d and Helmut König^a

^aInstitute of Microbiology and Wine Research, Johannes Gutenberg University Mainz, Johann-Joachim Becherweg 15, 55128 Mainz, Germany

^bInstitute of Earth Sciences, Heidelberg University, Im Neuenheimer Feld 234-236, 69120 Heidelberg

^cHeidelberg Center for the Environment (HCE), Heidelberg University, D-69120 Heidelberg, Germany

^dDeutsches Biomasseforschungszentrum gemeinnützige GmbH (DBFZ), Torgauer Straße 116, 04347 Leipzig, Germany

*Corresponding author:

Tobias May

Institute of Microbiology and Wine Research Johannes Gutenberg University Mainz Johann-Joachim Becherweg 15, 55128 Mainz, Germany Tel. +49-6131-3922662 Fax +49-6131-3922695

E-mail: tobias.may@posteo.de

Highlights:

- first time detection of a methanotrophic community in an industrial biogas plant
- identification of novel methanotrophic species
- qPCR analyses of methanotrophic cell counts
- determination of process conditions supporting methanotrophic growth

Download English Version:

https://daneshyari.com/en/article/6490350

Download Persian Version:

https://daneshyari.com/article/6490350

Daneshyari.com