

Title (en)

METHOD FOR PRODUCING POLYHYDROXYALKANOATES (PHA) FROM ORGANIC WASTE

Title (de)

VERFAHREN ZUR HERSTELLUNG VON POLYHYDROXYALKANOATEN (PHA) AUS ORGANISCHEN ABFÄLLEN

Title (fr)

PROCÉDÉ DE PRODUCTION DE POLYHYDROXYALCANOATES (PHA) À PARTIR DE DÉCHETS ORGANIQUES

Publication

EP 3987045 A1 20220427 (EN)

Application

EP 20826008 A 20200618

Priority

- US 201916448866 A 20190621
- CA 2020050846 W 20200618

Abstract (en)

[origin: WO2020252582A1] According to one broad aspect of this disclosure, a method is provided for producing polyhydroxyalkanoates (PHA) from organic waste. The method comprises homogenizing organic waste to obtain a feedstock that has about 0.01% to about 99.99% (w/w) dry mass solids. The feedstock is inoculated with an inoculum of acidogenic fermentative bacteria in order to obtain an inoculated feedstock. The inoculated feedstock is incubated for at least 1 day to obtain a fermentation broth. The fermentation broth comprises volatile fatty acids (VFAs) and undigested organic waste. The fermentation broth is filtered with a filter with a pore size ranging from 0.2 μm to 500,000 NMWC to remove the acidogenic fermentative bacteria and undigested organic waste, to obtain a clarified broth comprising concentrated VFAs. The clarified broth and high-PHA producing bacteria are incubated to produce intracellular PHA granules in the high-PHA producing bacteria. PHA polymers are extracted from the intracellular PHA granules.

IPC 8 full level

C12P 7/62 (2022.01); **C08G 63/78** (2006.01); **C08G 63/89** (2006.01); **C08J 11/06** (2006.01)

CPC (source: EP)

C12P 7/625 (2013.01); **C12P 39/00** (2013.01); **C12P 7/52** (2013.01); **C12P 7/54** (2013.01)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2020252582 A1 20201224; CA 3144507 A1 20201224; EP 3987045 A1 20220427; EP 3987045 A4 20230830

DOCDB simple family (application)

CA 2020050846 W 20200618; CA 3144507 A 20200618; EP 20826008 A 20200618