

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

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- 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  $\mu$ m 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

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CPC (source: EP)

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