

NEW TECHNOLOGY TO PRODUCE BIOPLASTICS FROM WASTE OIL SHOWCASED IN THE CZECH REPUBLIC PAVILION AT EXPO 2015

The Czech Republic Pavilion at EXPO Milan 2015 showcases a very interesting new technology to produce bioplastics from waste oil. Production sectors that use bioplastics obtained from waste oil are as follows: agriculture, bio-packaging, automotive industry and medical equipment.

The process to extract plastic from waste oil is obtained from bacterial fermentation, that is: microorganisms fed with oils grow up and once they reach a specific level of growth they produce PHA (polyhydroxyalkanoates, thermoplastic polymers synthesized by bacteria) and then they are isolated and purified and ready to be used in the production.

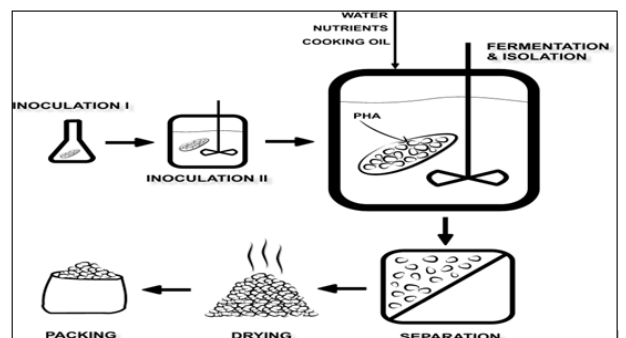
This technology stems from studies carried out by the Brno University of Technology and by the [Nafigate Corporation](#).

There are significant advantages in the use of waste oils instead of other raw materials; first of all there is plenty of waste oil, it does not use food and agricultural resources, and of course it is readily available: many Countries have programmes envisaging compulsory collection of oils in special areas; it is therefore convenient to locate factories in the proximity of these areas.

Nafigate innovative process represents an application at the industrial level of a bio-technology that uses waste as a raw material; the product obtained comply with two key requirements of the industry (biodegradability and mechanical resistance) and, moreover, it is a low-carbon solution.

Based on these successful experiments, a Czech-Chinese joint-venture, the *Suzhou Hydal Biotech* was set up in February 2015 so as to work in the biotechnology sector; its founders are NAFIGATE Corporation and Jiangsu Clean Environmental Technology Co., Ltd.

Hydal Biotech processes waste oil and presents unique world-wide know-how. Its biggest advantage is, in comparison to competition, that it doesn't need inputs from food chain such as corn and sugar. All these factors make price of their PHA products very competitive and interesting for booming bioplastics market.



Hydal Biotech is now working to transform such a scientific innovation in a production process available to many enterprises and therefore increase its potential environmental, economic and social impact.

To know more

[Hydal Biotech website](#)

[Frost&Sullivan 2014 European Award](#)

[Presentation in czexpo.com](#)

[Article in World Industrial Reporter](#)

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