

PAQUES, HVC and WATER BOARDS CONTINUE DEVELOPING BIOPLASTICS WITH DEMO INSTALLATION “PHA2USE”

Five water boards have pledged a financial contribution to the demo installation “PHA2USE” for the production of fully biodegradable bio plastics from waste water. This installation should be operational in 2021. The water boards thus contribute to the intended circular economy in 2050.

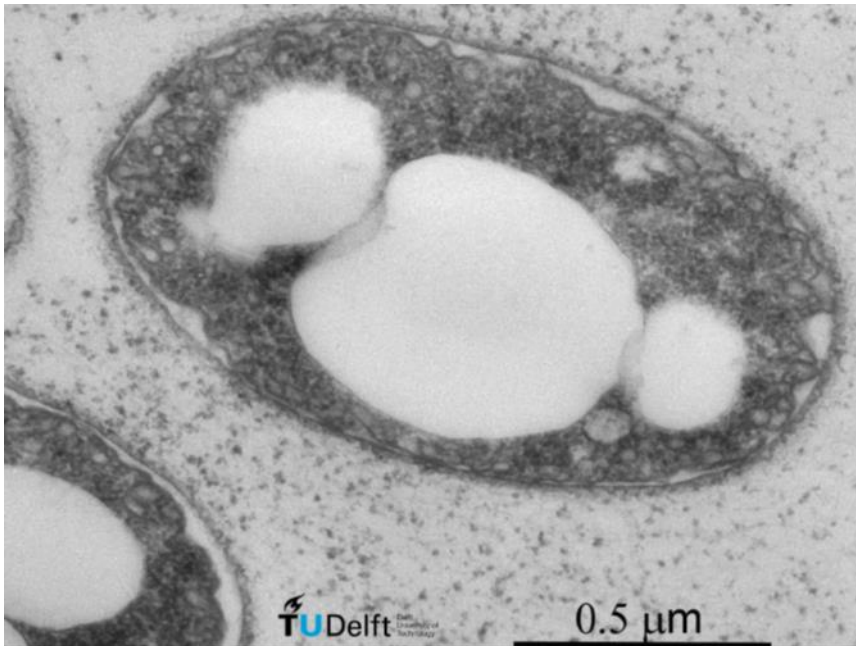


Picture: PHA Bioplastics

Wastewater is an important source of energy and raw materials for water authorities. Since 2007 the water boards have been working together more and more intensively in order to recover valuable substances such as biogas, cellulose, phosphate, alginate, biomass and therefore also this sustainable bio-plastics, in this case of the PHA type. Depending on the application, this can contribute to the reduction of fossil micro plastics in the environment.

BACTERIA PRODUCING FULLY DEGRADABLE BIOPLASTIC

In 2016, the water boards in the pilot project 'PHARIO' (PHA from RIOolwater (sewage water)), using bacteria that purify the waste water on a large scale, made the bioplastic PHA. The bioplastic 'PHA' is a natural polyester of high quality. Strong but also completely (cold) degradable under natural conditions. The unique qualities of PHA are particularly relevant for applications with a temporary function such as coating of fertilizer and seeds, degradable nets and bags, films for agriculture and as an alternative to fishing lead. The special thing about PHA from wastewater is that it is not made from food. This makes it one of the most sustainable bioplastics.



Picture: PHA bacteria

MARKET DEVELOPMENT

After the pilot trials, the water boards investigated whether the market could start with this trend, but this turned out to be a little too early for the market. The demo installation for PHA from wastewater is needed for further development of the applications and to be sure of a sales market. The market for this type of plastic is currently under development and looks promising. The plastics industry, which now usually works with fossil plastics, first wants to have enough information to test the processing and the application. With the PHA2USE demo-installation we will collect all relevant information.

OPERATIONAL IN 2021

The water authorities combine this initiative with an initiative of HVC to make PHA from their waste water. This creates more striking power. The joint demo installation (PHA2USE) requires an investment for which 2.5 million euros funding from the five water boards is now available. In addition, HVC and technology supplier Paques are investing in the joint project PHA2USE. An application for a European LIFE + subsidy is running for the project. Once this subsidy has been obtained, the water boards and their partners can build the demo installation. It is expected that the demo installation in 2021 will deliver the bioplastics PHA from sewage and industrial waste water and the applications will be further developed. The intended location for the installation is in the sludge incineration of HVC in addition to Dordrecht's wastewater treatment plant at Hollandse Delta. South Holland is now being added to this originally Brabant, Frisian and Zeeland initiative.

PARTNERS

PHARIO is carried out by a consortium consisting of the water boards Brabant Delta, De Dommel, Hollandse Delta, Scheldestromen and Wetterskip Fryslân. They are united in the Energy and Raw Materials Factory.

PHARIO will soon be part of the PHA2USE project that is co-financed by HVC and Paques. STOWA, SNB, TU Delft and Wetsus support the initiative with further knowledge development.