

MARKET POTENTIAL - BIODIESEL FROM SEWAGE

Origin:	Sewage
Customers:	Fuel industry Chemical industry Transport companies
Application:	Fuel



Sewage contains valuable substances that can be used circularly as a raw material for biobased products. However, this potential is currently underused. The European Interreg project WOW! wants to change this by extracting cellulose, lipids and fatty acids from sewage and producing bio-char (activated carbon), biodiesel, bio-oil, acetic acid and PHA bioplastics. This factsheet summarizes the results of the Market Potential Study of biodiesel. [Click here](#) to read the full report.

PRODUCTION:

For the production of biodiesel, the sewage inflow is used to cultivate *Microthrix parvicella* that can accumulate significant amounts of lipids from the wastewater. In a next step the lipids are extracted, processed and transformed to biodiesel.

QUALITY REQUIREMENTS:

The EU standards for biodiesel have to be fulfilled. There are several parameters that influence the biodiesel production step and its final quality (e.g. composition of fatty acids, content of water). The initial samples which were analyzed through process technologies, similar to conventional available methods for biodiesel production from crops (transesterification), provided promising results for the extraction of lipids from the produced lipid-rich sewage sludge.

GLOBAL BIODIESEL PRODUCTION IN 2019:

42 Mio. tonnes.

COLLECTABLE QUANTITY AT STP IN NORTH WEST EUROPE (THEORETICALLY): : Up to 2 Mio. t/a biodiesel considering all wastewater streams

(e.g., primary sludge, sludge from oil-water separator).

MARKET PRICE FOR CONVENTIONAL PRODUCTS:

0.70 – 0.91 €/l biodiesel from agriculture based raw material.

PRODUCTION PRIZE FOR BIODIESEL FROM SEWAGE:

1.59 €/l

APPLICATION:

The produced biodiesel from sewage meets the standard specifications (EN14214) for biodiesel in Europe and can thus replace fossil sources in the transport sector.

DRIVERS:

The main advantages of biodiesel from sewage is sustainability and legal requirements to enhance the renewable energy share in the European Union (RED II).

MORE INFORMATION:

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