

OPTIMISED ANAEROBIC DIGESTION PROCESS



"We demonstrate the advantages of Dual Anaerobic Digestion for a more efficient valorisation of sewage sludge."

Ledicia Pereira Gomez, Project Manager at Aqualia



30%
more biogas per kg
of dry solids

is the expected result of
the experiment.



HOW TO IMPROVE THE ANAEROBIC DIGESTION PROCESS, IN ORDER TO BETTER VALORISE SEWAGE SLUDGE?

> WHAT?

To improve the bioconversion of sewage sludge, Aqualia proposes to split the anaerobic digestion process into two reactors and to work with co-digestate.

This innovative process presents three main advantages:

- The biogas produced is fitted with a higher energy content and is present in bigger quantity;
- The remaining digestate is pathogen-free and could therefore be used as biofertilisers instead of being landfilled or incinerated.

> HOW?

During an anaerobic digestion process, several factors can impact the intensity of the chemical reactions, and consequently affect the final bioconversion results.

By implementing a two-step anaerobic digestion process, Aqualia's solution allows for a better adjustment of those factors to the expected chemical reactions.

The sludge goes successively in two different reactors and Aqualia plays with both the retention time and the temperature conditions to foster the intensity of the chemical reactions in each reactor.

Additionally, as dual anaerobic digestion works more efficiently and is easier to control with high loads of organic matter, Aqualia uses co-digestates. Before the bioconversion, the sewage sludge is combined with other residues, such as residues from biodiesel production or food production.

> WHEN?

Experimentations are still ongoing, but the first results are promising. By the end of 2021, Aqualia hopes to be able to share some first conclusions.

Contact

Ledicia Pereira Gomez, Project Manager at Aqualia
ledicia.pereira@fcc.es

www.aqualia.com

Want to learn more about Anaerobic Digestion ?

- Read scientific paper [here](#)
- Listen to our webinar on **Technologies for urban biowaste and wastewater valorisation**.
- Discover our **SCALIBUR project**.

SCALIBUR



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