SNAC
A titration system for measuring concentrations of ammonia and volatile fatty acids

Methanisation is a virtuous process for treating organic waste and the production of energy, however it is highly sensitive to the presence of ammonia and volatile fatty acids. Purification, and indeed economic efficiency, is closely linked to dynamic management of these compounds. No satisfactory solution was previously available for monitoring under actual production conditions.

Carnot 3BCAR Institute

Scientific/technological breakthrough

From 2013 to 2016, during the course of a CIFRE PhD agreement between LBE (part of Carnot 3BCAR Institute) and start-up BioEnTech, a simple analysis method was developed and then coupled with advanced modelling of the chemical processes involved in titration, culminating in the filing of a European patent and an international publication. Two prototypes were then developed in partnership and their success in industrial plants made it possible to start producing around twenty units.

The LBE-BioEnTech partnership has therefore made it possible to market SNAC, a disruptive sensor, following three key development phases: research, prototyping and industrial production.

Competitive advantage for the economic stakeholders

SNAC is a fully-fledged micro-laboratory dedicated to the control of digesters.

It enables BioEnTech to offer a unique digester monitoring solution that combines (i) flexibility and ease of use, (ii) responsiveness and (iii) accuracy.

Around 40 SNAC analyser units have already been sold and BioEnTech has built a monitoring assistance service offering around the interpretation of the analyser's data. For BioEnTech, this innovation opens up a previously inaccessible market segment – i.e., monitoring small methanisation units (<500 KW) – and strengthens its technical offering in the global sector.

Partnership

- **BioEnTech is an innovative start-up specialising in methanisation processes and information systems, with strong expertise in the monitoring, supervision and modelling of bioprocesses to improve the economic performance of methanisation units.**

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