



**BagFerm:** Highest degree of precision in determining efficiency of fermentation substrates

**Innovative analysis method**



# Optimal biogas plant energy yield thanks to BagFerm



WESSLING experts achieve groundbreaking innovation for energy generation in the biogas industry: the analysis method that can determine the efficiency of fermentation substrates to a hitherto unprecedented degree of precision is called BagFerm. How high is the quality of maize varieties used as substrate in biogas plants? Which new substrates will substitute maize in future? BagFerm provides answers to these questions. Our newly developed analysis method determines the substrate efficiency in biogas plants with the highest possible degree of precision.

## Optimise energy generation

Fermentation substrate analysis is an important requirement for the optimisation of biogas plants in economic and ecological terms. This is why it is all the more important to precisely determine the gas yield of a substrate: every one percent less minimises the profit. Demand for efficient seeds is high. This is why BagFerm is a milestone of energy generation optimisation for plant operators, substrate suppliers and seed farmers.



1 Sampling and sample preparation for BagFerm measurement



2 This is what it looks like: the maize silage under investigation



3 Back at the laboratory after measurement with BagFerm – Evaluation of digestate



4 Precise statements of yield: maize silage after 3, 20 and 30 days of fermentation in BagFerm

## Small-scale biogas plant

The innovative fermenter on a scale of 1:1000 is at the heart of the new method. It is a prerequisite for exact fermentation conditions. Substrate samples are first weighed and filled into bags and then put into the fermenter for fermentation. The WESSLING experts investigate hundreds of samples of a wide range of substrates at the same time. This results in a large number of sample series being comparable with each other. The fermentation process is followed by laboratory analysis. How much substrate has remained unfermented? The experts use the loss of mass to precisely determine the potential gas yield.

Real fermentation conditions, comparability through a large number of sample series, comprehensive laboratory analysis: this perfect combination results in the highest degree of precision.

## Our services:

- On-site sampling
- Analysis of different raw materials intended for use as substrates in biogas plants
- Assessment of substrate efficiency and quality
- Analysis on the basis of a real fermentation process Individual consulting

## Your advantages:

- Personal contact person
- Precise recommendations for action
- Economic and ecological optimisation potential for your plant
- Analysis of hundreds of samples at the same time and under the same conditions
- Comparability of different substrate types





**WESSLING** is an international and independent analytical, testing and consulting company represented at 26 locations in Europe and China. More than 1,600 employees work on the continuous improvement of quality and safety of products and processes of environmental and health protection. We examine, analyse, assess, survey, plan and implement projects – for the sustainable improvement of the quality of life.

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