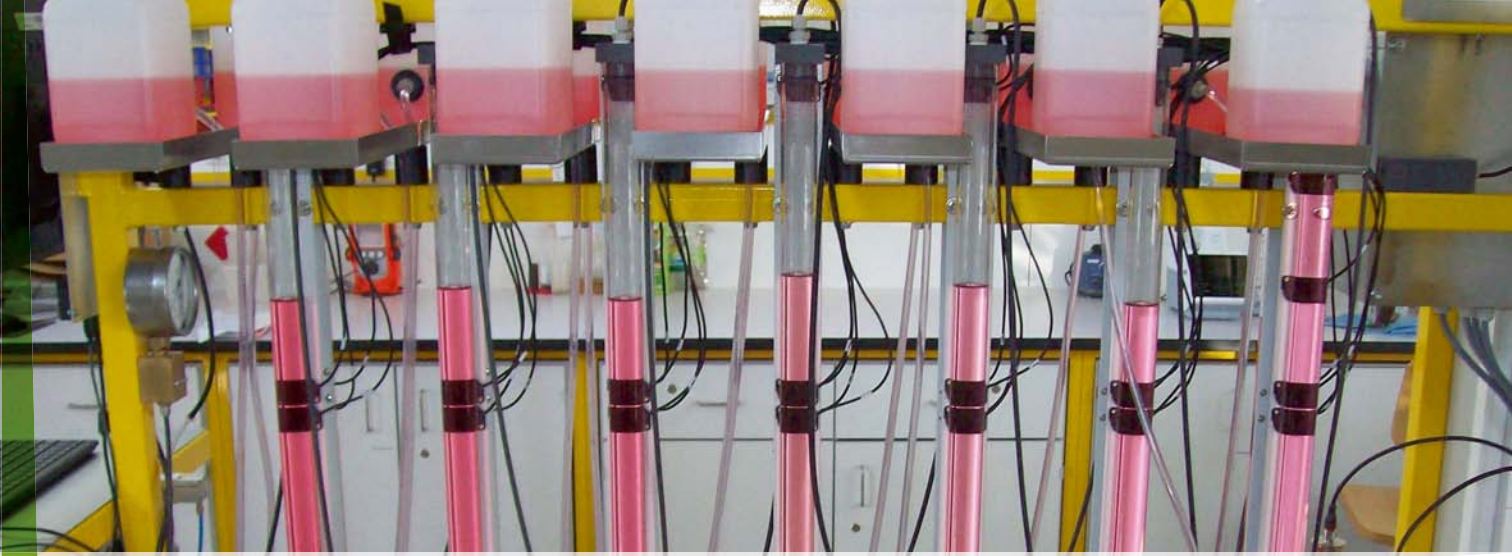




BIOMASS WORKING GROUP

SERVICES AND CONSULTING
CONCERNING BIOGAS

Hochschule Offenburg Biomass Working group

The Biomass Working Group emerged from the research cooperation Industry on Campus (IoC) and specializes in the energetic use of biomass. With long-time research and analysis experience, the members of the Working Group can rely on comprehensive expertise in the field of energetic use of biomass as well as on state-of-the art research and testing facilities.

The Biomass Working Group offers laboratory testing as well as application-oriented services and advising for clients such as biogas or wastewater treatment plant operators, farmers, energy providers, companies involved in biological waste materials or other waste management, and municipal operations.

Industrial partners of the Industry on Campus research cooperation:

badenova
Energie. Tag für Tag

steag

Moeschle
Apparate- & Behälterbau

rma
PIPELINE EQUIPMENT

iwb

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Services

Laboratory Work

- analysis of volatile organic acids in relation to buffer capacity (VOA/TAC)
- pH-value determination
- dry and organic dry substances
- total carbon, organic carbon and nitrogen content (TC, TOC, TN)
- determination of upper heating value
- fermentation testing according to VDI guideline 4630 (double or triple determination)
- gas analysis (CH₄, CO₂, H₂S, O₂)

Consulting

- advising on problematic biogas substrates
- execution of experiments for process optimization

Fermentation testing according to VDI Directive 4630

An automated fermentation device has been developed at Of-fenburg University enabling us to conduct exact gas analyses of different substrates. The high quality of our analysis is based on:

- accurate measurement of the volume and contents of the biogas through a direct measurement method
- realistic gas formation by using uncrushed substrates in big, 2-liter reactors
- identification of inhibited gas-evolution behavior by high resolution in areas with high gas-formation rates
- confirmation of measurement results by parallel reference measurements
- reliable assessment of the results through comparisons with numerous other analysis results

Scientific testing assistance

Examples:

- optimization of the substrate mixture
- impact of temperature on fermentation
- mechanical or thermal pretreatment of substrates
- reusing mechanically or thermally treated fermentation residues
- effects of inorganic additives
- problematic biogas substrates

We also construct and market adapted biogas fermentation systems according to customers' special requirements.

