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.

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Industrial partners of the Industry on Campus research cooperation:

badenova
steag
Moeschle
RMA
IWB
We also construct and market adapted biogas fermentation systems according to customers’ special requirements.

**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 Offenburg 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

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