

Accredited lab analysis



Efficient and accredited analysis around your biogas plant

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bonalytic is a laboratory accredited according to DIN EN ISO / IEC 17025 with proven expertise in the biogas sector.

According to the accreditation requirements, bonalytic provides a custom adapted test report.

chemical analysis of fermenter material

necessary sample volume for the analysis

Package A	Regular and basic analysis of fermenter material	approx. 80 ml
pH	DIN EN 12176 – S5	
VFA/TIC	Titration (according to Nordmann)	
Package B		80 ml
Single volatile fatty acids	Determination by gas-chromatography	
Package AB	To detect feeding problems at an early stage	approx. 80 ml
pH	DIN EN 12176 – S5	
VFA/TIC	Titration (according to Nordmann)	
Single volatile fatty acids	Determination by gas-chromatography	
Package AB + DM / oDM		80 ml
Services AB plus DM and oDM	DIN EN 12880-S2a, DIN EN 12879-S3a	
Package AB + NH₄-N		80 ml
Services AB plus ammonium nitrogen	Ion-selective electrode	
Package AB + EC		80 ml
Services AB plus electrical conductivity (EC)	DIN EN 27888-C8	
Package ABC	In depth analysis	approx. 800 ml
pH	DIN EN 12176 – S5	
VFA/TIC	Titration (according to Nordmann)	
Single volatile fatty acids	Determination by gas-chromatography	
DM and oDM	DIN EN 12880 – S2a & DIN EN 12879 – S3a	
Total nitrogen	DIN EN ISO 11261	
Ammonium nitrogen	Ion-selective electrode	
Package FVA (Fertiliser value analysis)	For an optimal fertiliser strategy, Quality assurance and effluent management	approx. 800 ml
Total nitrogen	DIN EN ISO 11261	
Ammonium nitrogen	Ion-selective electrode	
DM	DIN EN 12880 – S2a	
P / K / Mg / Ca / S	DIN EN 13346 – S7 & DIN EN ISO 11885 – E22	

Since 2004 the laboratory of bonalytic has analysed samples from more than 2.500 bio-gas plants. The laboratory services are constantly adapted and expanded according to the needs of the market.

We process your samples from Monday to Friday as fast as possible according to our high quality standards.

necessary sample volume for the analysis

Package EA (Environmental auditor)	Evidence of conformity according to "dry fermentation bonus" according to German regulation	
DM (Substrate)	DIN EN 12880 – S2a	
Single volatile fatty acids	Determination by gas-chromatography	
Sampling	DIN EN ISO/EC 17025/2005 (only by accredited sampler)	
Test certificate for environmental auditor		
Additional analysis of trace elements	For special issues, for exact determination approximately	160 ml
All trace elements that are required for an optimal biogas process	DIN EN 13346 – S7 & DIN EN ISO 11885 – E22	
Test on inhibitor (48 h)*	Without identification of the inhibitor	1 kg / 1 l
Test on biogas production	Analysis on biological inhibition	
Fermentation test in batch *		3 l
Mesophilic 37°C o. thermophilic 54°C, gas yield, gas quality		
DM, oDM, NH ₄ -N, amount of gas		
Gas concentration CH ₄ , CO ₂ , H ₂ S, H ₂		
Residual gas potential *	For digestate or effluent	4 l / 12 l
Mesophilic 37°C / not heated 20°C, gas yield, gas quality		

Substrate analysis

DM-complex analysis * (silages)		approx. 500 g
DM, oDM, crude fibre		
FoDM (fermentable org. dry matter)		
Fodder analysis * (NIR) [basic] maize-, grass-, whole crop silage		approx. 1 kg
DM, oDM, crude ash, crude protein, crude fibre, starch, sugar, crude fat, NDF, ADF		
Calculation of the theoretical biogas yield according to Weißbach		
Parameters for silage quality * (HPLC) [Plus]		approx. 1 kg
DM, oDM, pH, organic acids and alcohols		

* not accredited analysis

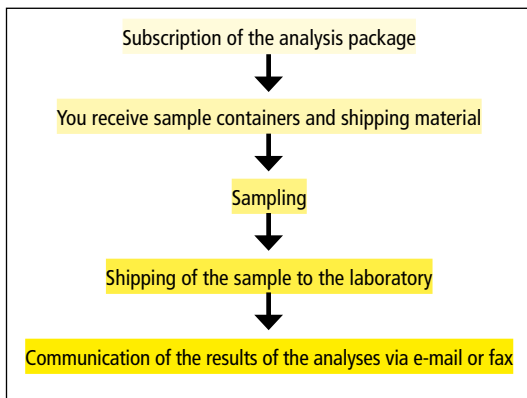
Process monitoring – the key to successful feeding management

The analyses packages of bonalytic always give you a detailed insight in your fermenter! This is the precondition for economic plant operation and the proof of evidence that your plant has been operated according to national rules.

Accredited sampling for the test report

For a complete and traceable accredited analysis, also sampling has to be performed by trained personnel. All the Schaumann BioEnergy consultants are trained and recognised as accredited samplers. Our dense network of consultants ensures rapid sampling at your plant.

Process



The benefits for you

- ▶ Accredited analysis ensures acceptance by all authorities
- ▶ Many years of analytical experience in the field of biogas processes
- ▶ Fast analysis
- ▶ VFA/TIC, pH and ammonium nitrogen usually on the same day of the sample arrival
- ▶ Range of fermentation acids and DM/oDM, usually 48 hours after the sample arrival

Assistance packages

You are neither a biologist nor a chemist and therefore you need expert support for the optimised operation of your biogas plant? Besides analysis-based special products for process optimisation, Schaumann BioEnergy offers also time-limited assistance packages. Accurate analysis is the essential background for the qualified consultancy and individual biological management of your biogas plant.

Specialists in the field of biogas – our partner:



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