

Order form for biogas analysis 2021

Sample container:

LUFA
Auftrags-Etikett

(nur vom Labor anzuwenden)

Principal = invoice recipient:

LUFA costumer ID:

Name, first name (company)

Street

Postcode/City

Telephone Fax

Email

Duplicate of the test report for:

LUFA costumer ID:

Name, first name (company)

Street

Postcode/City

Telephone Fax

Email

Communication of the report: mail fax email

Communication of the report: mail fax email

Kind of sample:

Sample identifier:

Sample taker:

Date of sampling:

Please mark required analyses with a cross:

- | | |
|---|---|
| <p><input type="checkbox"/> 1. Acetic acid equivalent
(preparation and analysis)</p> <p><input type="checkbox"/> 2. Spectrum of acids – IC method
Acetic acid equivalent and spectrum of acids (acetic acid, propionic acid, butyric acid) – preparation and analysis
<input type="checkbox"/> only if acetic acid equivalent $\geq 2,0$ g/kg</p> <p><input type="checkbox"/> 3. Säurespektrum GC-Methode
Acetic acid equivalent and spectrum of acids (acetic acid, propionic acid, butyric acid, iso-butyric acid, valeric acid, iso-valeric acid, caproic acid, iso-caproic acid) preparation and analysis
<input type="checkbox"/> only if acetic acid equivalent $\geq 2,0$ g/kg</p> <p><input type="checkbox"/> 4. Dry matter (DM)</p> <p><input type="checkbox"/> 5. Organic dry matter (oDM)</p> <p><input type="checkbox"/> 6. pH value</p> <p><input type="checkbox"/> 7. Ammonium nitrogen</p> <p><input type="checkbox"/> 8. Buffer capacity (TIC value)
incl. calculation of VOA/TIC value, only in combination with analysis of acetic acid equivalent according to analysis 1, 2 or 3</p> <p><input type="checkbox"/> 9.1 Trace elements (small package)
nickel (Ni), cobalt (Co), molybdenum (Mo), selenium (Se)
incl. dry matter and decomposition</p> <p><input type="checkbox"/> 9.2 Trace elements (large package)
nickel (Ni), cobalt (Co), molybdenum (Mo), selenium (Se), iron (Fe), manganese (Mn), copper (Cu), zinc (Zn), boron (B), vanadium (V)
incl. dry matter and decomposition</p> <p><input type="checkbox"/> 10. Salt content</p> <p><input type="checkbox"/> 11. Determination of C/N-ratio
specification of total carbon and total nitrogen on request</p> | <p>methodology handbook¹⁾ III, C3</p> <p>methodology handbook¹⁾ III, C3
LUFA Nord-West AA 1/3A-046</p> <p>methodology handbook¹⁾ III, C3
LUFA Nord-West AA 1/3A-034 (#6)</p> <p>VDLUFA I, 2.1.1</p> <p>VDLUFA II, 10.1</p> <p>VDLUFA I, A 5.1.1</p> <p>VDLUFA II, 3.2.6</p> <p>DIN 38409-7 (H 7)</p> <p>DIN EN ISO 11885
DIN EN ISO 17294</p> <p>VDLUFA II, 11.14</p> <p>DIN EN 15936
DIN EN 16168</p> |
|---|---|

- 12. **Energiegehalt NIR-Methode in** maize silage, grass-silage, hay, CCM, grain maize, barley whole plant silage, rye whole plant silage, wheat whole plant silage, oat whole plant silage, triticale whole plant silage (not any mixtures), barley, rye wheat, triticale, soya grist VDLUF A III, 31.2
- 13. **NIR analysis of energy incl. calculation of the theoretical gas yield according to Baserga** maize silage, grass-silage, hay, CCM, grain maize, barley whole plant silage, rye whole plant silage, wheat whole plant silage, oat whole plant silage, triticale whole plant silage; cereals like barley, rye, wheat, triticale, soybean meal (not any mixtures). Specification of the theoretically possible gas yield as l/kg FM, l/kg DM, l/kg organic DM and % methane. VDLUF A III, 31.2
calculated by Baserga
- Additional analysis of**
 - Ca P Na Mg K S Cu
 - Zn Mn Fe AlDIN EN ISO 11885
- Package of minerals (Ca, P, Na, Mg, K including basic prise)
- Package of trace elements (S, Cu, Zn, Mn, Fe including basic prise)
- 14. **Theoretical gas yield according to Baserga (wet chemical analysis)** Duration approx 7-10 working days; Specification of the theoretically possible gas yield as l/kg FM, l/kg DM, l/kg organic DM and % methane; specification of dry matter, organic dry matter, crude fibre, crude protein, crude fat and nitrogen free extractives (NFE) Weender analysis
calculated by Baserga
- 15. **Fermenting quality/fermenting acids** LUF A Nord-West AA 1/3A-046
- 16. **Determination of total nitrogen (N_{total})** VDLUF A II, 3.5.1.1
- 17. **Sulphur** DIN EN ISO 11885
- 18. **Screening test of antibacterial substances** VDLUF A III, 28.4.1
- 19. **Analysis of nutrients – fermentation residues from renewables biogas plants** DM, oDM, N_{ges}, NH₄-N, P₂O₅, K₂O, MgO, CaO, S, Cu, Zn according to DüVO; VDLUF A II;
DIN EN 12880-S2a;
DIN EN 12879-S3a;
DIN EN ISO 11732;
DIN ISO 11261;
DIN EN ISO 11885;
VDLUF A II.1, 6.3
Observe the declaration note! See below
- 20. **Analysis of nutrients – fermentation residues of co-fermentation biogas plants** DM, oDM, N_{total}, NH₄-N, P₂O₅, K₂O, MgO, CaO, S, Cu, Zn, alkaline active constituents
- 21. **Schwermetalle nach Bioabfallverordnung** lead (Pb), cadmium (Cd), chromium (Cr), copper (Cu), nickel (Ni), mercury (Hg) and zinc (Zn) – incl. dry matter and decomposition according to the german
biowasteregulation
- 22. **Analysis according to the regulation of bio waste (complete)** *Observe the declaration note! See below*
- 23. **Salmonellae** methodology handbook¹⁾ IV C1
- 24. **Germinable seeds and parts of plants capable of sprouting** methodology handbook¹⁾ IV B1
- 25. **Fermenting test for substrates** Duration approx. 35 days; specification of the gas yield as l_N/kg FM, l_N/kg DM, l_N/kg oDM and % methane; daily maintenance over the whole period. **Prior consultation of the laboratory is necessary (phone: +49 (0) 441-801-836)!** VDI giude line 4630
VDI giude line 3475 (#6)
- 26. **Fermenting test of residual gas potential** Duration approx. 90 days; specification of the gas yield as l_N/kg FM, l_N/kg DM, l_N/kg oDM and % methane; daily maintenance over the complete period. **Prior consultation of the laboratory is necessary (phone: +49 (0) 441-801-836)!**

Important – declaration note – referred to items 19 und 22
Declaration suggestion for farm manure brought into market:
 yes additional costs: 5,- € (not necessary when spreading on own land!)
This declaration can only be made for the use of plant and animal inputs in form of manure or fecal matter!
In case of a declaration preparation, the indication of input materials and quantity proportion is mandatory!
 (If filled by hand, please enter legibly into the table.)
The fee-based entry of the animal N-amount into the declaration is desired: yes no

	input material	quantity (in %)	N _{tot} (in %)
1.			
2.			
3.			
4.			

In case of more than four input materials please use the back or a separate sheet.
The sum has to be 100%.

Please also enter the total N-values in % fresh mass into the table. The additional cost for assumption and calculation of the N-amount into the declaration amount 4,-€.