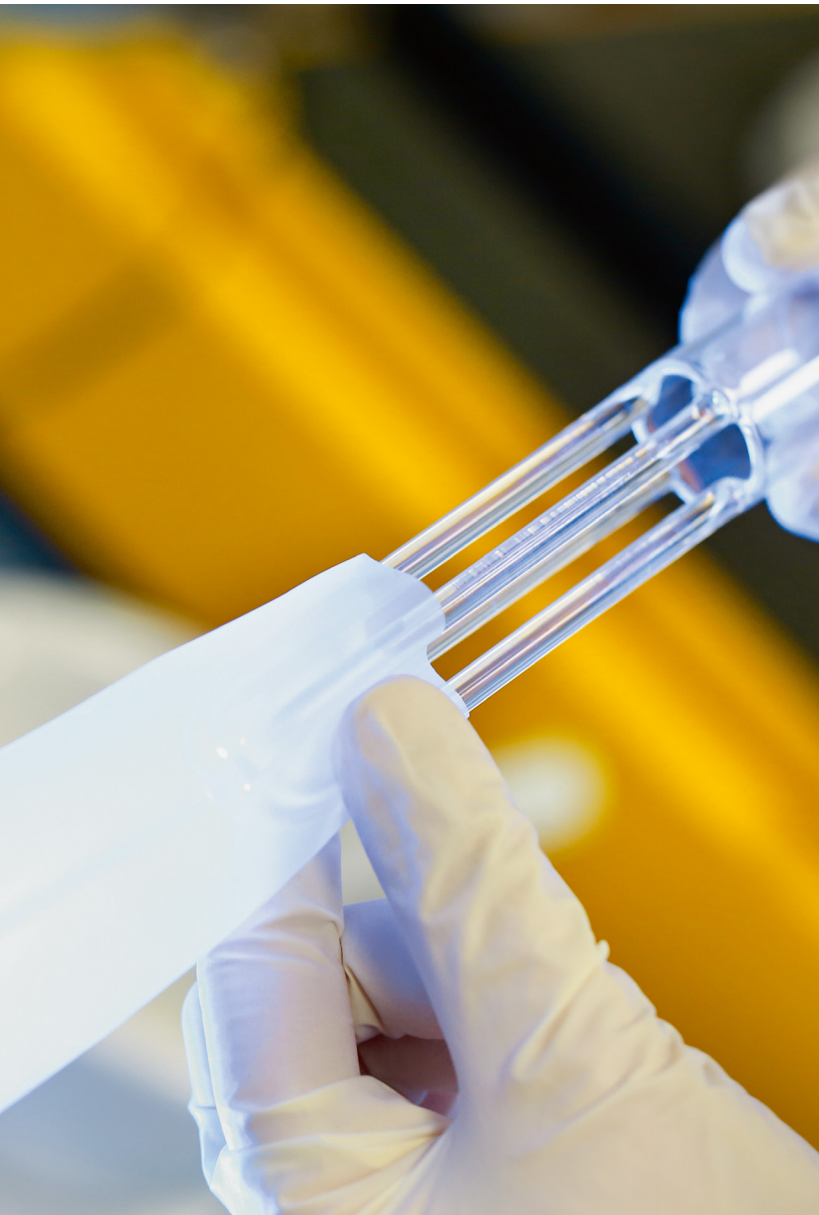


Analysis systems from a technological leader

Highest efficiency in the feedstuff laboratory



Analysis systems from a technological leader

WEENDER | VAN SOEST | CNCPS | KJELDAHL | DUMAS |
HYDROLYSIS | FAT EXTRACTION

Solutions for the feedstuff laboratory



Analysing feedstuff provides the basic parameters for healthy and efficient animal nutrition. The foundation for this analysis were laid in Weende, Germany in the 19th century, with the invention of the Weende method. Supplemented by the detergent method from Van Soest (1967) and other analyses, it is the world's standard method for determining the nutritional value of feedstuffs.

When analysing feed, the dry matter content is determined first. The dry matter contains the components crude ash, crude fibre, crude protein, crude fat and N-free extractives which can also be determined. Afterwards, the analysis of the fibre fractions ADF, ADL, NDF and further analysis are carried out. After the whole process, conclusions can then be drawn about the dietary utilisability and about an optimised dietary composition.

Kjeldahl-N: Crude protein | NDLXP | ADFXP

KJELDATHERM

Digestion unit



KJELDATHERM and VACUSOG / TURBOSOG scrubber

- Reproducible digestion conditions through precise temperature-time control
- Lift to remove the loaded insert rack from the block
- Digestion can be visually monitored
- Suction of the digestive gases through an exhaust unit and water jet pump
- 40 x 100ml, 8 x 250ml, 20 x 250ml, 8 x 400ml or 20 x 400ml digestion tubes
- Waterfree VACUSOG or TURBOSOG scrubber for the elimination and neutralisation of sulphuric acid gases (optional)

VAPODEST

Distillation system
Distillation + Titration



VAPODEST 500 C
with autosampler

- Automatic steam distillation with titration and result calculation in a few minutes
- For all established methods of Kjeldahl determination and other physical separation methods for steam-soluble substances, such as §64 LFGB, ASTM, AOAC, EPA, DIN/EN/ISO, VDLUFA
- Programmable addition of boric acid, water and sodium hydroxide
- Programmable reaction time, steam power and suction time for sample waste
- For tube sizes 250, 400 or 800 ml
- Automatic autosampler for up to 20 samples
- LIMS connection, easy import and export of data
- Very reliable and robust

Fibre analysis

FIBRE THERM

Fibre extraction
Crude fibre, ADF, ADF_{om}, NDF, NDF_{om}, aNDF_{om}



FIBRE THERM
and manual
FibreBag system

- Automatic processing of the boiling-, washing- and filtration processes for the determination of individual fibre fractions
- Simultaneous analysis of 12 samples:
- Standardised analysis conditions enable precise and reproducible results
- Optimal extraction and filtration conditions due to FibreBag technology
- The nitrogen-free FibreBags with samples can be subjected to the N-determination directly after the NDF- or ADF- treatment and drying
- Secure wetting and flooding of the sample with detergent solution
- High savings of work time, chemicals and energy compared to classic, manual methods
- Automated amylase addition (optional)

Raw fat / Free fat / Total fat

HYDROTHERM

Hydrolysis



HYDROTHERM HT 6

- Fully-automatic acid hydrolysis for classic fat determination according to Weibull-Stoldt / Weibull-Berntrop
- Cost savings of up to 80% per sample in comparison to the manual process
- Simultaneous hydrolysis of up to 6 samples
- Very fast rinsing- and filtration processes
- Exactly reproducible analysis results
- For almost all sample types and sizes
- Very high level of occupational safety
- Very easy operation

SOXTHERM

Solid-liquid extraction



Available as
2-, 4- or 6-places unit

- Fully-automatic rapid extraction for up to 24 samples simultaneously
- Precise extraction results of the highest validity
- Much faster than the Soxhlet method
- Almost complete recuperation of the solvent
- Fulfills the highest safety requirements
- Extremely versatile; can also be used for residue- and environmental analysis
- User-friendly operation

Dumas-N

DUMATHERM

N-determination according to Dumas



DUMATHERM N Pro

- Automatic determination of the nitrogen/protein content according to the Dumas combustion method in 2 - 3 minutes
- Protein determination according to §64 LFGB, DIN, AOAC, DIN/EN/ISO, Gafta ...
- Automatic processing of the samples
- High savings compared to the Kjeldahl methods
- High level of analysis reliability / reproducibility
- High level of occupational safety
- User-friendly control software
- Low maintenance costs
- Original C. Gerhardt consumables lower the costs per sample

MEETING HIGH DEMANDS ON ANALYTICS:

Strict environmental regulations and requirements from national and international norms and guidelines place high demands on analytics. In environmental analysis, a wide variety of matrices and parameters must be analysed.

C. Gerhardt's analytical systems cover a wide range of analytical possibilities, here are only a few examples:

Parameter	Matrix	Gerhardt Device
Crude protein	Feeding stuff and animal feeding stuff, grain Grain, Feeding stuff Animal feed Feeding stuff	TURBOTHERM / KJELDATHERM TURBOSOG / VACUSOG VAPODEST 200-500 C
Total nitrogen Crude protein	Oilseeds and Animal feeding stuff Animal feed	DUMATHERM N Pro
Total fat Raw fat Free fat	Palm- and almond kernel, Sunflower seed Nuts Fish-/ bone meal Offal Copra Corn Rapeseed Soy Etc.	HYDROTHERM or Classic Hydrolysis SOXTHERM oder Soxhlet
Fibre (CF) ADF NDF aNDF ADL NDLXP	Oilseeds Rapeseed Copra Palm kernel Mung bean Seeds containing starch Hay Gras silage Etc.	FIBRE THERM or Manuel FibreBag method



APPLICATION SERVICE

Our laboratory staff is regularly trained and is always available for specific questions. If desired, we can optimise your applications or create an application specifically for you: On-site service, evaluation of your samples in our application laboratory, applicative support (webinars / trainings / online support), consultation / installation and training, aftersales service / customer service

We are at your disposal: info@gerhardt.de

A STRONG PARTNER

We are a worldwide leader in the automation of reference analysis.

We stand for the development, production and global distribution of highly efficient, precise and reliable systems.

Our specialities are automatic systems for

- + Nitrogen analysis according to Kjeldahl
- + Nitrogen analysis according to Dumas
- + Determination of fat content (hydrolysis and extraction)
- + Analysis of plant fibres (crude fibre, ADF, NDF)



C. Gerhardt GmbH & Co. KG
Cäsariusstraße 97
53639 Königswinter, GERMANY
Tel. +49 (0) 2223 / 2999-0
info@gerhardt.de
www.gerhardt.de