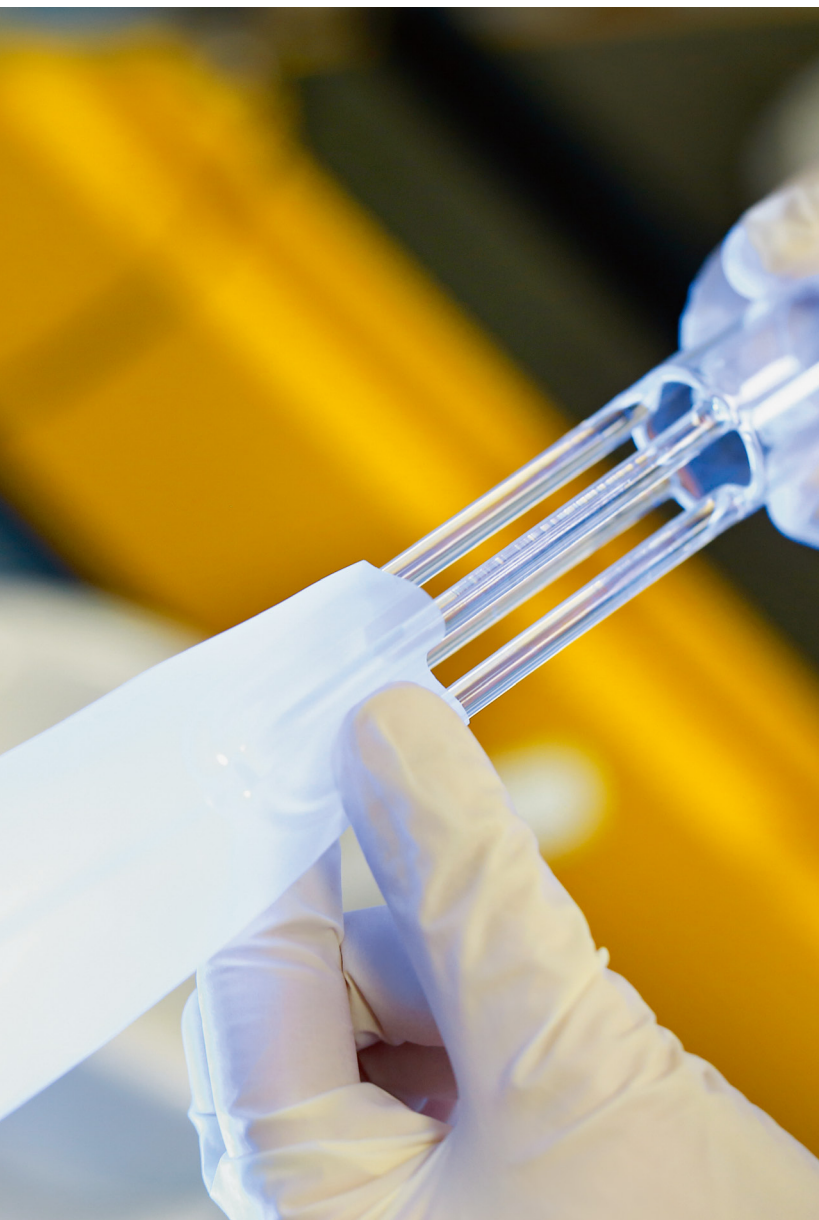


Analysis systems from a technological leader

HIGHEST EFFICIENCY IN THE FEEDSTUFF LABORATORY



Guide to the automation of reference analysis

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

Kjeldahl-N: Crude protein | NDLXP | ADFXP

Digestion

KJELDATHERM block unit

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

KJELDATHERM
and VACUSOG /
TURBOSOG
scrubber



Distillation + Titration

VAPODEST distillation system

- + 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

VAPODEST 500 C
with autosampler



Raw fat / total fat

Hydrolysis

HYDROTHERM hydrolysis unit

- + 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

HYDROTHERM HT6



Dumas-N

N-determination according to Dumas

DUMATHERM nitrogen analyzer

- + 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

DUMATHERM N Pro



Fibre analysis

Fibre extraction:

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

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

FIBREATHERM FT12



Extraction

SOXATHERM extraction unit

- + Fully-automatic rapid extraction for up to 24 samples simultaneously
- + Precise extraction results of the highest validity
- + Much faster than the Soxhlet method
- + Near complete recuperation of the solvent
- + Fulfills the highest safety requirements
- + Extremely versatile; can also be used for residue- and environmental analysis
- + User-friendly operation
- + Available as 2-, 4- or 6-places unit

SOXATHERM
6-places and 2-places,
with PC control



SAMPLE

FIBRE



CF | ADF | ADF_{om} | NDF | NDF_{om} | α NDF_{om}

FIBRE THERM
automatic fibre-extraction



PROTEIN



Kjeldahl-N | NDLXP | ADFXP

KJELDATHERM + VAPODEST
automatic digestion and distillation
according to Kjeldahl



Dumas-N

DUMATHERM
automatic N-determination
according to Dumas



Free fat | Total fat

HYDROTHERM
automatic HCl hydrolysis



FAT



SOXTHERM
automatic fat extraction



ORGANIC MASS OM



A STRONG PARTNER

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

We therefore do not limit ourselves to the automation of costly methods, but seek to develop them further.

Our automatic systems have been tested and meet the minimum requirements for precision in terms of recovery and repeatability to conform with the official international reference standards.

Our area of specialisation is 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)**

which are mainly used to analyse **food, animal feed, raw materials and plant matter**.

The reliable analysis quality of our systems and applications is frequently confirmed in national and international ring tests.

A STRONG SERVICE

High-performance units also require a high-performance service

Our technical service is available for prompt help via telephone, via email and on site and performs inspections and maintenance to prevent any faults from occurring. Our service staff are regularly trained and are highly competent points of contact.

Be it for repairs or preventive maintenance, you can rely on the C. Gerhardt service department. We offer compact maintenance and service packages and attractive conditions for your C. Gerhardt analysis systems. We are happy to develop an individual maintenance and service contract with you for equipment from our company.

Our company headquarters in Königswinter brings together all important areas under one roof:

- + **Management**
- + **Marketing**
- + **Distribution**
- + **Service**
- + **Production**
- + **Development**
- + **Application/test lab**
- + **Training centre**

WHAT WE STAND FOR:

- + **Development**
- + **Production**
- + **Global distribution**

of highly efficient, precise and reliable analysis systems in accordance with international quality standard ISO 9001



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