behr
Labor-Technik

behrotest® Equipment for the Determination of

Crude Fibre

www.behr-labor.com

Quality made in Germany

Crude Fibre

Crude fibre:

Fat-free organic substances in feedingstuffs which are insoluble in acid and alkaline media.

Crude fibre is a measure of the quantity of indigestible cellulose, pentosans, lignin, and other components of this type in present foods.

It is the residue of plant materials remaining after solvent extraction followed by digestion with dilute acid and alkali. These components have little food value but provide the bulk necessary for proper peristaltic action in the intestinal tract.

Determination of Crude Fibre with behr: AOAC and AACC Compliant

The determination of the crude fibre content of food and animal feed is mandatory worldwide. Standard methods – i.e. AACC Method 32-10.01, Crude Fiber in Flours, Feeds, and Feedstuffs or AOAC Official Method 962.09, ISO 5498:1981, (AAFCO code 004.00), Fiber (Crude) in Animal Feed and Pet Food and, of course ISO6865:2000 (AAFCO code 004.06) – describe the procedure.

A sample – de-fatted where necessary – is treated successively with boiling solutions of sulphuric acid and potassium hydroxide of specified concentrations. The residue is separated by filtration on a sintered-glass filter washed, dried, weighed and ashed within a range of 475 - 500 °C.

The loss of weight resulting from ashing corresponds to the crude fibre present in the sample.

behrotest® Equipment for the Determination of Crude Fibre:

EXR 4

EXR 4

Basic Line

behrotest® apparatus for crude fibre separation

Crude fibre separation apparatus with 4 or 6 sample positions.

Complete with:

- 600 ml beaker
- Water-cooled condenser with cool water distribution
- Condenser stand with drip tray
- Heating positions individually infinitely adjustable
- Main power switch with pilot light

Fully assembled complete device with all the necessary accessories.

behrotest® apparatus for crude fibre separation

Type	Product description	Art. No.
EXR 4	with 4 sample positions	B00218446
EXR 6	with 6 sample positions	B00218448

Technical Data

	EXR 4	EXR 6
Dimensions (w x h x d)	53 x 32 x 74 cm	76 x 32 x 74 cm
Power consumption	1440 W	2160 W
Frequency	50/60 Hz	50/60 Hz
Current consumption	8 A	10 A
Weight	16 kg	20 kg
Number of sample positions	4	6
Glass vessel size	600 ml	

behrotest® filtration unit for crude fibre separation

Filtration unit for crude fibre separation with 4 or 6 sample positions.

Complete with:

- Filter crucible
- Filtration advancers
- Seals
- Connection fittings
- Drainage pipe with connecting nozzle for vacuum or water suction pump

e.g. to determine the crude fibre content according to EN ISO6865

behrotest® apparatus for crude fibre separation

Type	Product description	Art. No.
SC 4-2	with 4 positions	B00693906
SC 6-2	with 6 positions	B00688191

SC 4-2

SC 6-2

AF 2000 - complete extraction unit for SC 4 and SC 6

Complete with:

- Diaphragm vacuum pump
- 2 ltr. collection bottle
- Tubes

behrotest® extraction unit

Type	Product description	Art. No.
AF 2000	Complete extraction unit	B00800250

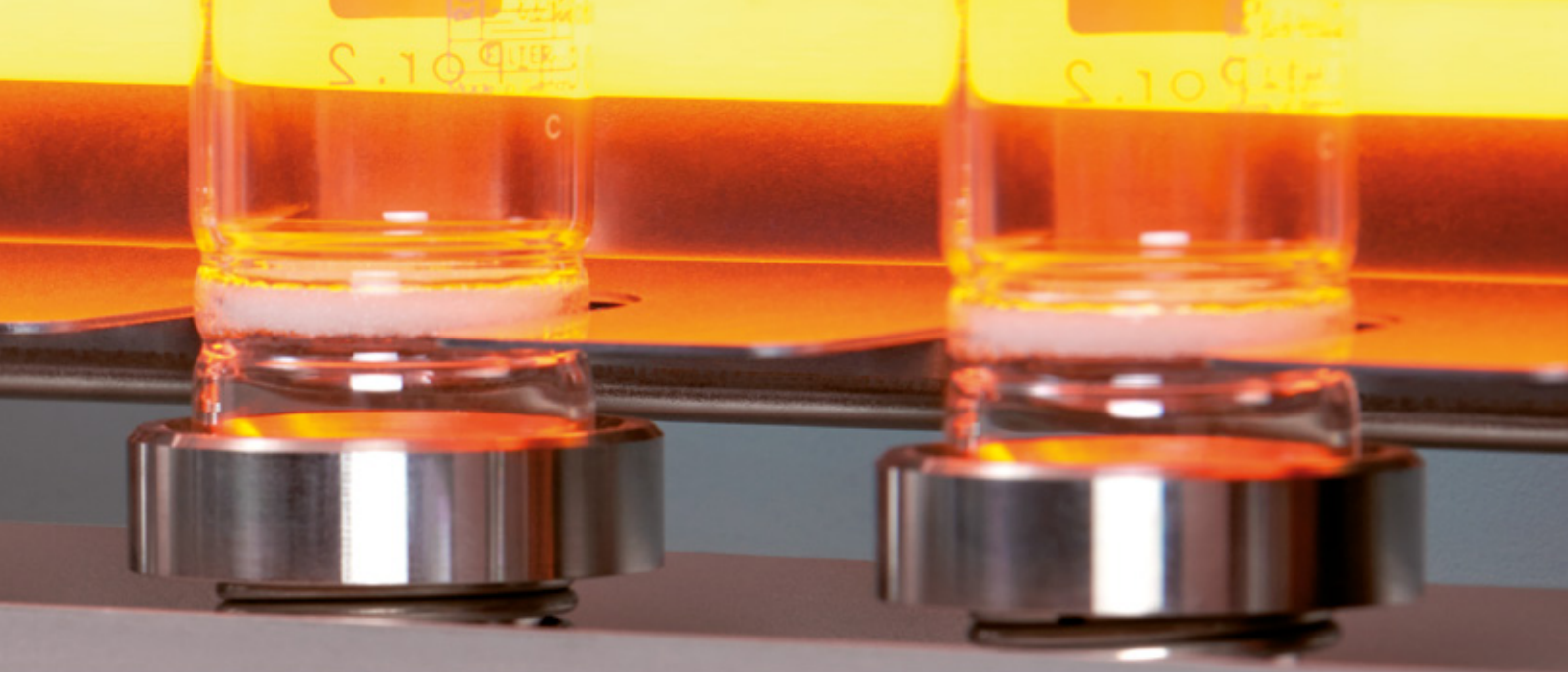
AF 2000

Accessories

Type	Product description	Art. No.
BG 600	behrotest® hydrolysis beaker 600 ml	B00231807
CFI	behrotest® Cold fingers for crude fiber or hydrolysis	B00232939
FT 50	behrotest® glass filter crucibles for crude fiber	B00652415
FV 50	behrotest® adapters for filter crucibles	B00652061

BG 600

FT 50



behrotest® Equipment for the Determination of Crude Fibre: Comfort Line

The behrotest® Comfort Line equipment for the determination of crude fibre offer

- Rapid analysis
- boiling, rinsing and filtration in one unit
- no loss of sample during determination
- processing of multiple or single samples
- reliable results and
- high reproducibility

They are ideally suited for

- total crude fibre determination (part of the Weender animal feed analysis as performed in Europe)
- neutral detergent fibre and acid detergent fibre determination (NDF and ADF according to Van Soest)
- acid detergent lignin determination (ADL according to Van Soest)
- different fractions of fibre (cellulose, hemicellulose and pectin)

behrotest® CF 6 Semi-automatic

Semi-automatic Models

behrotest® CF 2+2 and CF 6 Semi-automatic Crude Fibre Extraction Unit

Max. 4 or 6 sample places

Easy operation: The analyst is guided through the procedure by messages on the display.

behr ABP (“acknowledge before proceeding”) method for optimum analytical safety.

Possible manual operation of air and suction pumps.

Practical tray for transfer of crucibles prevents any possible sample loss, as the same crucibles can be processed by the DG 2+2 or DG 6 cold extraction unit.

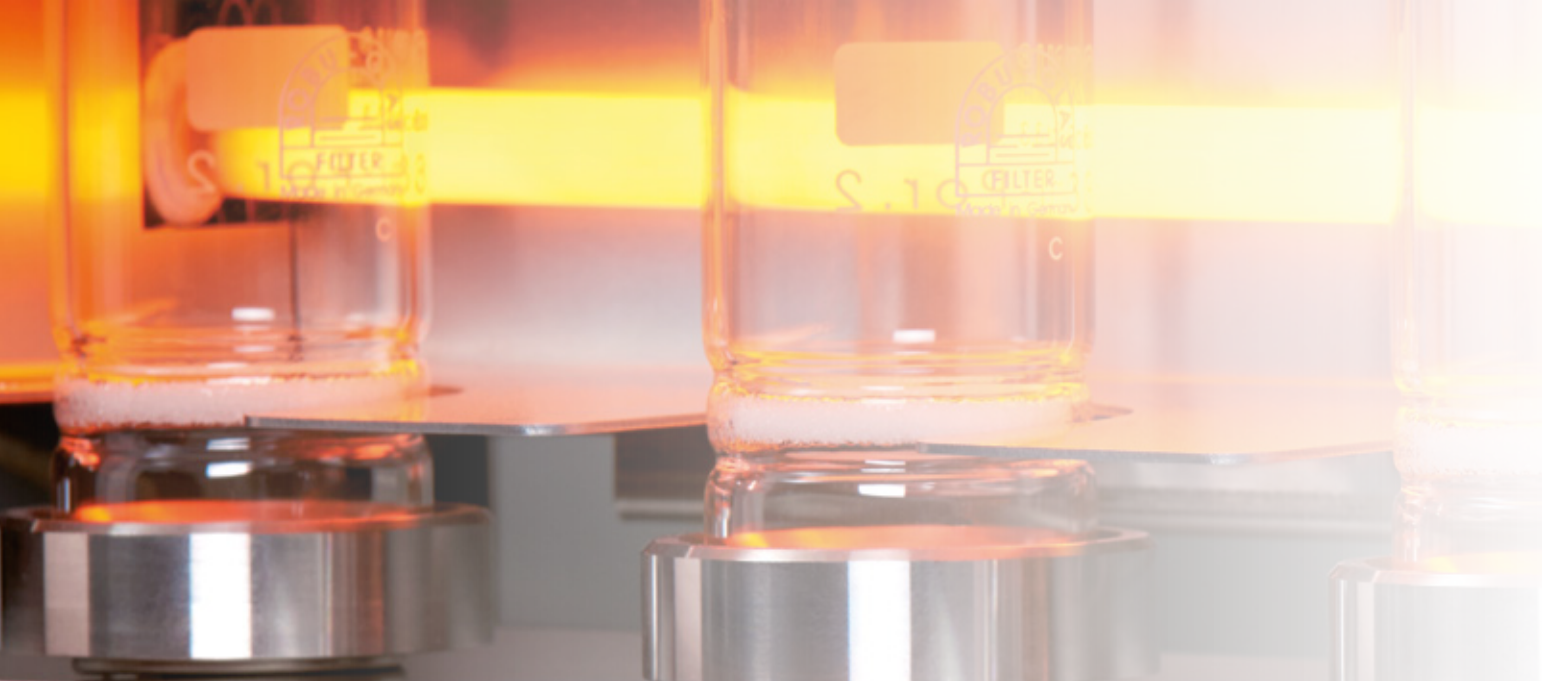
Type	Product description	Art. No..
CF 2+2	for 4 sample positions	B00659292
CF 6	for 6 sample positions	B00659293

CF 2+2

Technical Data

	CF 2+2	CF 6
Number of sample positions	4	6
Sample quantity	from 0,5 to 3 g	
Reproducibility	± 1 %	
Dimensions (w x h x d)	59 x 56 x 67 cm	75 x 56 x 67 cm
Weight	43 kg	51 kg
Nominal voltage	230 V~, 50/60 Hz	
Nominal power	1000 W	1400 W
Display	LCD	
Programs	99	
Energy setting range	0... 100%, in steps of 1 %	
Time setting range	1-999 min, digitally adjustable	
Cooling water consumption	2 l/min	
Sample blowing free and rinsing	Air pump	
Reagent suction	Peristaltic pump	

CF 6



GK-W

TA 6 mit TIE 6

CFT 30

KP 1

Accessories for CF 2+2/CF 6

Type	Product description	Art. No.
GK-W	behrotest® glass jug 1.25 l for water	B00661511
GK-A	behrotest® glass jug 1.25 l for acid solution	B00661509
GK-B	behrotest® glass jug 1.25 l for base solution	B00661510
KP 1	behrotest® heating unit with controller	B00217695
KTT	behrotest® Plastic funnel, prolonged	B00649871
TIE 4	behrotest® Multi-Crucible-Snapper 4fold for CF 2+2 / DG 2+2	B00645430
TIE 6	behrotest® Multi-Crucible-Snapper 6fold for CF 6 / DG 6	B00645422
SIEB 4	behrotest® Sieves Set for CF 2+2	B00645428
SIEB 6	behrotest® Sieves Set for CF 6	B00645427
TA 4	behrotest® crucible rack for 4 filter crucibles	B00441175
TA 6	behrotest® crucible rack for 6 filter crucibles	B00314330
CFT 30	behrotest® filter crucible 30 ml for crude fibre unit, 6 pcs.	B00658875
	Pump hose for the peristaltic pumps for CF, with connector pieces	B00668980
CFK 1	behrotest® Reflux condenser	B00660004
SWS	Float switch, for 20-liter container with opening 49 mm inner ø	B00233060
GKW 20	Container 20 l, opening 49 mm inner ø	B00177003
WAR-CF 4	behrotest® maintenance set for CF 2+2	B00662072
WAR-CF 6	behrotest® maintenance set for CF 6	B00661512

Cold Extraction

behrotest® DG 2+2 and DG 6
Cold Extraction Units for De-fattening

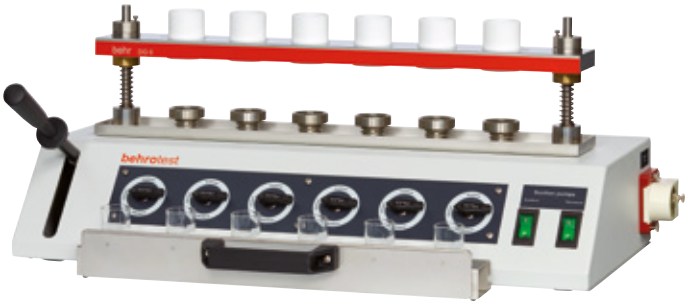
Necessary condition for a reliable crude fibre determination is a low fat content (< 10 %) of the sample. Samples exceeding this value require a preliminary fat extraction with acetone and hexane or petroleum.

The behrotest® DG 2+2 and DG 6 perform a rapid fat extraction directly in the same glass crucibles used in the CF 2+2 and CF 6. The user can start crude fibre extraction immediately after completing fat extraction.

Practical tray for transfer of crucibles prevents any possible sample loss, as the same crucibles can be processed by the CF extraction units.

DG 2+2

Type	Product description	Art. No.
DG 2+2	for 4 sample positions	B00659296
DG 6	for 6 sample positions	B00659297



DG 6

Technical Data

	DG 2+2	DG 6
Nominal power	200 W	200 W
Nominal voltage	230 V~, 50/60 Hz	
Dimensions (w x h x d)	64 x 60 x 30 cm	88 x 60 x 30 cm
Weight	18 kg	23 kg
Reagent suction	Peristaltic pump	

EXK 300

SG 1000

TG 6

Accessories for DG 2+2/CF 6

Type	Product description	Art. No..
TIE 4	behrotest® Multi-Crucible-Snapper 4fold for CF 2+2 / DG 2+2	B00645430
TIE 6	behrotest® Multi-Crucible-Snapper 6fold for CF 6 / DG 6	B00645422
SIEB 4	behrotest® Sieves Set for DG 2+2	B00645428
SIEB 6	behrotest® Sieves Set for DG 6	B00645427
TA 4	behrotest® crucible rack for 4 filter crucibles	B00441175
TA 6	behrotest® crucible rack for 6 filter crucibles	B00314330
CFT 30	behrotest® filter crucible 30 ml for crude fiber unit, 6 pcs.	B00658875
GKW 20	Container 20 l, opening 49 mm inner ø	B00177003
FS002	Sensor for monitoring the maximum fill level, PP	B00210222

Desiccator/ Silica gel

Type	Product description	Art. No.
TG 6	behrotest® crucible rack with removable handle for 6 filter crucibles	B00710923
EXK 300	behrotest® Desiccator, borosilicate glass 3.3, with plastic knob and porcelain plate (DN 300)	B00711550
SG 500	behrotest® Silica gel, self-indicating (orange gel) 1-3 mm, 500 g	B00726297
SG 1000	behrotest® Silica gel, self-indicating (orange gel) 1-3 mm, 1000 g	B00726298

behrotest® Muffle Furnace

For daily use in the laboratory behrotest® muffle furnace MO 8 is the right choice for heat treatment of different materials such as filter crucibles for the determination of the crude fibre content. The modern design, the excellent workmanship and a high degree of reliability characterizes this universal muffle furnace.

- Maximum temperature in the oven chamber up to 1100 °C
- Temperature stability at 500 °C: +/- 10°C
- Chamber volume of 8 Liters
  (Inner Diameter H x B x T in cm: 19.5 x 31.0 x 13.5)
- Heating elements are embedded on four sides of the chamber in vacuum-formed fiber insulation
- Housing manufactured from stainless steel
- The door opens upwards
- Optional: behrotest crucible rack with removable handle for 6 filter crucibles

MO 8

Type	Product description	Art. No.
MO 8	behrotest® Muffle Furnace	B00696792

Technical Data

	MO 8
Abmessungen (W x D x H)	66 x 49,50 x 44,50 cm
Adjustment	temperature control
Temperature range max.	1100 °C
Power consumption	1800 W
Frequency	50 Hz
Current consumption	8 A

This may also interest you

Extraction units for crude lipid

Determination of the crude protein according to Kjeldahl:

- Infrared digestion devices with manual operation and also programmable
- Block digestion unit, also with fully-automatic lift
- Steam distillation units for (almost) any requirement
- Titration devices

Made in Germany

267201

ISO 9001 BUREAU VERITAS Certification

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Subject to technical changes without notice. Errors and omissions excepted.

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