

Soxhlet extraction

Classic fat determination with Soxhlet extraction after hydrolysis

Hydrolysis principle

This acid digestion process dissolves both "free fats" as well as "bound fats" from the overall fat content.

The fat is frequently naturally enclosed in the cell matrix of the food or fodder or chemically bound. In these cases, a hydrolysis step before extraction completely releases the fat.



Hydrolysis-digestion units p. 18

The user filters the hydrolysate of the separated sample by using a glass sample tube filled with sand or Celite.

The user then rinses the fatty filter residue with water in order to remove the acid.



Filter equipment for hydrolysis p. 18

After drying, the filter residue is finally extracted.



Soxhlet extraction systems p. 9

Complete single extraction units

The standard extraction method is the Soxhlet method. behr apparatus for Soxhlet extractions fulfil all the various requirements in everyday laboratory practice.

- Practical brackets for condensers and intermediate extraction pieces for safe storage between extractions
- Extractor sizes from 30 ml to 1,000 ml
- Compact apparatus with one sample position
- Series extraction devices with 4, 6 or 8 sample positions
- Extractors with specially developed siphon tubes (make: "Bröckerhoff") guarantee consistent extraction cycles across all sample positions
- Extractors with taps remove the need for additional distillation after the extraction
- Condensers with threaded fittings

The behr hydrolysis units (4 or 6 sample positions) also enable acid digestion prior to extraction (determination of the total fat content according to Weibull and Stoldt).

Complete single extraction units

Complete single extraction units with base frame, heating device, bracket, tubes and glass apparatus (reaction flask, extractor, Dimroth condenser for extraction). Infinitely variable heating control. After the extraction cycle, the extractors with tap conduct the solvent directly into the dispensing bottle.

Includes extraction thimble and boiling chips in a sample pack.

Technical data the Soxhlet extraction

	KEX 100	KEX 250	KEX 500/1000
Voltage/Frequency	230 VAC/ 50/60 Hz		
Power consumption	450 W		1100 W
Weight	approx. 7.5 kg		approx. 8.5 kg
Dimensions in cm (W x D x H)	approx. 23 x 33 x 80		approx. 23 x 35 x 95

Complete single extraction units

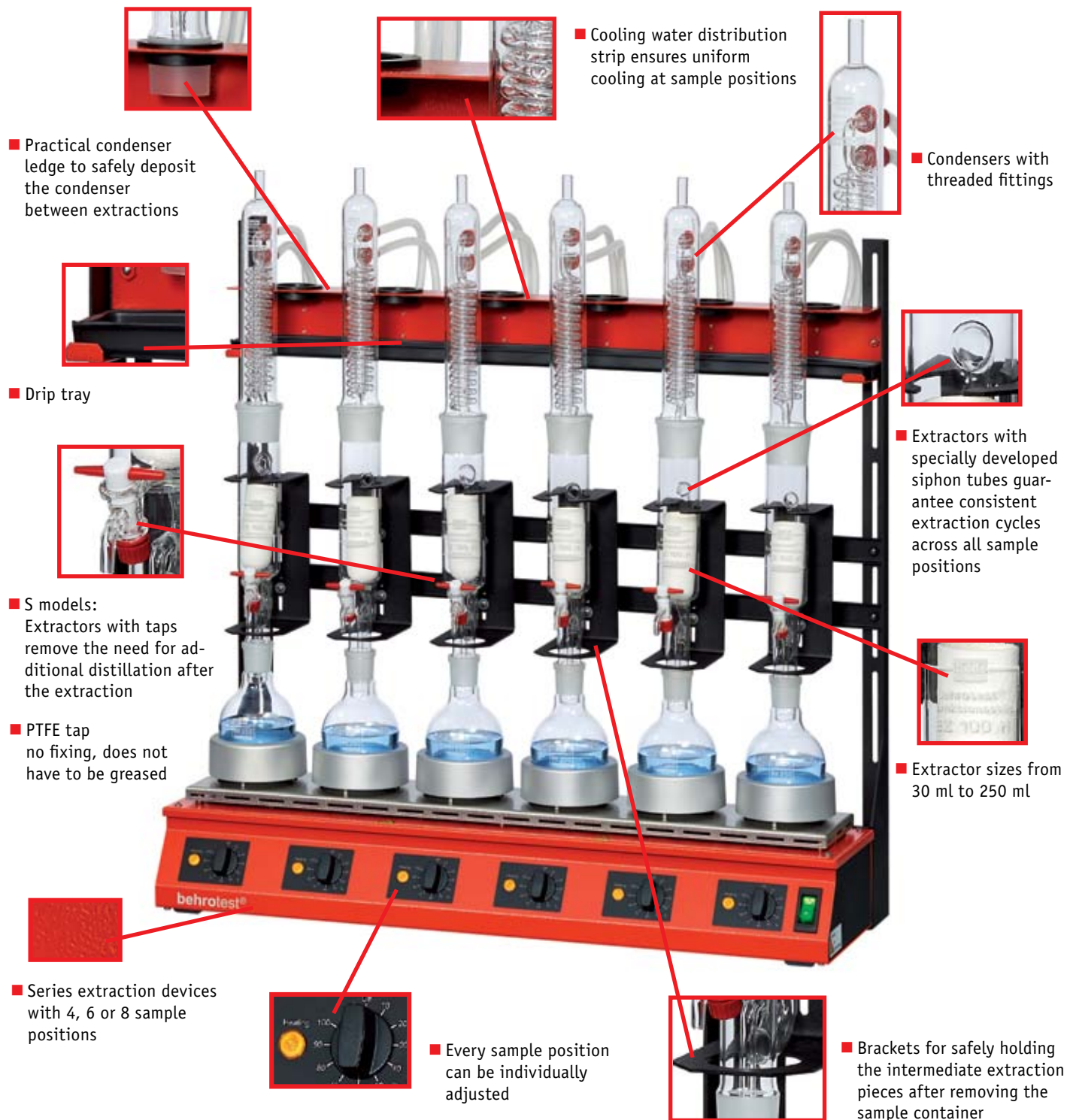
Make	Item description	Item no.
KEX 60	for 60 ml extraction	B00441131
KEX 100	for 100 ml extraction	B00217708
KEX 250	for 250 ml extraction	B00217737
KEX 500	for 500 ml extraction	B00217739
KEX 60 F	for 60 ml extraction with tap	B00441132
KEX 100 F	for 100 ml extraction with tap	B00217710
KEX 250 F	for 250 ml extraction with tap	B00217732
KEX 500 F	for 500 ml extraction with tap	B00217740
KEX 1000 F	for 1,000 ml extraction with tap	B00441133



KEX 100 F

behrotest® series extraction devices

precisely aligned to your needs



behrotest® series extraction devices

behrotest® series extraction devices are the cost-effective and user-friendly solution for classic Soxhlet and fat extractions:

- Complete with reaction vessels, intermediate extraction pieces and condensers
- Energy individually adjustable for every sample position
- Cooling water distribution strip ensures uniform cooling at sample positions
- Extractors with specially developed siphon tubes (make: "Bröckerhoff") guarantee consistent extraction cycles across all sample positions
- Practical condenser ledge to safely deposit the condenser between extractions
- Brackets for safely holding the intermediate extraction pieces after removing the sample container
- S models: Extractors with taps remove the need for additional distillation after the extraction

behrotest® series extraction devices - round-bottom flasks

Make	Sample positions	Tap	Extractor content ml	Item no.
R 604	4	-	60	B00218453
R 606	6	-	60	B00218454
R 604 S	4	+	60	B00218455
R 606 S	6	+	60	B00218456
R 104 S	4	+	100	B00218425
R 106 S	6	+	100	B00218424
R 108 S	8	+	100	B00441134
R 254 S	4	+	250	B00218435
R 256 S	6	+	250	B00218436

behrotest® series extraction devices - flat-bottom flasks

Make	Sample positions	Tap	Extractor content ml	Item no.
R 104 S-SK	4	+	100	B00585692
R 106 S-SK	6	+	100	B00520234
R 108 S-SK	8	+	100	B00600445

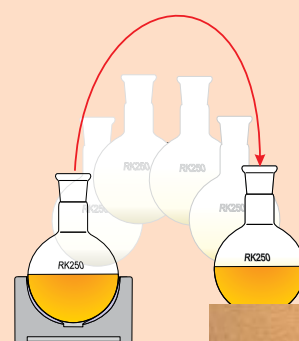
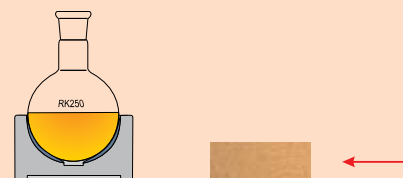
Technical data for the series extraction devices

	4 sample positions	6 sample positions	8 sample positions
Voltage	230 VAC		
Frequency	50/60 Hz		
Power consumption	1500 W	2250 W	3000 W
Power consumption	7 A	10 A	13 A
Weight (without glass)	approx. 15 kg	approx. 20 kg	approx. 25 kg
Dimensions in cm (W x D x H) (without glass)	approx. 53 x 32 x 74	approx. 76 x 32 x 74	approx. 90 x 32 x 74

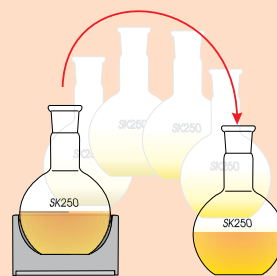
100 ml extraction with flat-bot-tomed flask: Safe and practical

behr precision positioning cradles for flat-bottomed flasks ensure an extremely safe and simple workflow for a 100 ml extraction.

For conventional round-bottomed flasks



the user needs additional cork rings to position the flask on the working surface.



Flat-bottomed flasks can easily be placed on any flat surface.

Benefits:

- No additional material required (cork rings)
- No additional sample manipulation (positioning in the cork ring)
- Improved vessel stability



WABEX 425

Series extraction devices - with water bath for highly flammable solvents
includes glassware and connection tubes

Make	Item description	Extractor content ml	Item no.
WABEX 410	4 sample positions simultaneously	100	B00513701
WABEX 425	4 sample positions simultaneously	250	B00513702
WABEX 610	6 sample positions simultaneously	100	B00513703
WABEX 625	6 sample positions simultaneously	250	B00513704

Technical data

	WABEX 410/425	WABEX 610/625
Dimensions in cm (H x W x D)	81 x 68 x 32	81 x 98 x 32
Weight (without glass)	15 kg	19 kg
Nominal voltage	230 V	230 V
Power consumption	1000 W	1500 W



EZ 100/H

Accessories for the Soxhlet extraction

Extractors

Make	Item description	Item no.
EZ 60	Soxhlet extractor, 60 ml	B00592289
EZ 60/H	Soxhlet extractor, 60 ml, with tap	B00592290
EZ 100	Soxhlet extractor, 100 ml	B00217967
EZ 100/H	Soxhlet extractor, 100 ml, with tap	B00217970
EZ 250	Soxhlet extractor, 250 ml	B00217974
EZ 250/H	Soxhlet extractor, 250 ml, with tap	B00217973
EZ 500	Soxhlet extractor, 500 ml	B00217980
EZ 500/H	Soxhlet extractor, 500 ml, with tap	B00217981
EZ 1000/H	Soxhlet extractor, 1,000 ml, with tap	B00373164

Extraction thimbles

Make	Item description	Item no.
EX 60 HS	for EZ 60 (EZ 60/H), package includes 25 units	B00604374
EX 100 HS	for EZ 100 (EZ 100/H), package includes 25 units	B00600442
EX 250 HS	for EZ 250 (EZ 250/H), package includes 25 units	B00217975
EX 500 HS	for EZ 500 (EZ 500/H), package includes 25 units	B00600462
EX 1000 HS	for EZ 1000/H, package includes 25 units	B00602316

Stands

Make	Item description	Item no.
RIP 4	for 4 extraction thimbles up to ø 38 mm	B00602349
RIP 6	for 6 extraction thimbles up to ø 38 mm	B00602350



EX 100 HS

PTFE sleeves

Make	Item description	Item no.
PTFE 34	PTFE sleeves for 60 ml extractors	B00602392
PTFE 45	PTFE sleeves for 100 ml and 250 ml extractors	B00217909
PTFE 60	PTFE sleeves for 500 ml extractors	B00602391
PTFE 71	PTFE sleeves for 1,000 ml extractors	B00602374

Round-bottomed flask

Make	Item description	Item no.
RK 250	250 ml, for 60 ml and 100 ml extraction, (NS 29/32)	B00218499
RK 500	500 ml, for 250 ml extraction, (NS 29/32)	B00218500
RK 1000	1,000 ml, for 500 ml extraction, (NS 29/32)	B00218502
RK 2000	2,000 ml, for 1,000 ml extraction, (NS 29/32)	B00652062

Flat-bottomed flask

Make	Item description	Item no.
SK 250	250 ml, for 100 ml extraction	B00491162

Reflux condensers

Make	Item description	Item no.
RFK 60	for 60 ml extractors	B00592291
RFK 100	for 100 ml and 250 ml extractors	B00218214
RFK 500	for 500 ml extractors	B00217972
RFK 1000	for 1,000 ml extractors	B00602310

Positioning cradles

Make	Item description	Item no.
AM 100/94	for 100 ml round-bottomed flasks including spacing inlay	B00217701
AM 250/941	for 250 ml round-bottomed flasks with integrated spacer bars	B00231006
AM 250/942	for 250 ml flat-bottomed flasks with integrated spacer bars	B00441225
AM 500/941	for 500 ml round-bottomed flasks with integrated spacer bars	B00231007
AM 1000/145	for 1,000 ml round-bottomed flasks including spacing inlay	B00441114



RK 250


RK 250
in positioning cradle
AM 250/941

SK 250
in positioning cradle
AM 250/942
